

# PUBLIC HEALTH REPORTS

VOL. 40

SEPTEMBER 11, 1925

No. 37

## A COMPARATIVE STUDY OF RAT-FLEA DATA FOR SEVERAL SEAPORTS OF THE UNITED STATES

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### Introduction

Bubonic plague, in so far as is known, has never made its appearance along the Atlantic seaboard of the United States, notwithstanding the large ports of entry which have constant communication with plague-infected districts and the presence of rats and rat fleas. On the other hand, plague has appeared in mild epidemic form in San Francisco and Los Angeles, Calif., and New Orleans, La., and has been reported from Seattle, Wash., Galveston and Beaumont, Tex., and Pensacola, Fla., but in these ports climatic conditions are entirely different from those found on the North Atlantic coast. Surg. H. McG. Robertson, of the United States Public Health Service, has suggested (1) that the absence of plague may be accounted for by the effect of cold weather on flea breeding and flea longevity, tending to cause a partial disappearance of rat fleas or to reduce them to a safe minimum during a greater part of the year.

It is a well-known principle in epidemiology that the mere presence of an insect is not sufficient to produce an epidemic of insect-transmitted disease; the insect must also be present in sufficient numbers. There is, therefore, a safe minimum which, when reached, precludes the possibility that an insect-borne disease will assume epidemic proportions, and eventually results in its total disappearance from a community. Robertson's theory is that the seasonal prevalence of rat fleas is too short to permit of a general spread of plague among rats and from rat to man. He points out that, in modern times, plague has not been a real menace north of 35 degrees north latitude, except on the Mediterranean and on the Pacific coast of the United States, and that while it has appeared in England, it has been more or less self-limited.

Robertson's conclusions are as follows:

"(1) Bubonic plague is essentially a disease of hot climates, and, having been introduced into tropical countries, it tends to persist indefinitely.

"(2) Outside of the immediate Tropics, this disease is rather definitely limited in the extent to which it will spread.

"(3) In countries with a mean midwinter temperature of 45° F. or below, bubonic plague is occasional, accidental, and distinctly self-limited, and it seems possible for it to occur in the colder regions only for short periods under unusual conditions."

It was accordingly deemed advisable by the Public Health Service that data concerning prevalence and varieties of fleas found on rats should be obtained for various United States ports. It was felt that the information to be acquired by the study of such data might be expected to have an important bearing upon the possibility of the spread of bubonic plague in case of its introduction and upon the protective and eradivative measures to be planned.

#### Synopsis of Literature on Previous Studies in Various Places

Rat-flea studies of various kinds have been made in a number of places. The results of some of them are, briefly, as follows:

A survey made by Mitzmain (2) in Berkeley and Oakland, Calif., from January, 1909, to December, 1909, gave the following results:

Month	Rats trapped	Fleas collected	Percentage of rats with fleas	Average fleas per rat	Monthly mean temperature, °F.
January.....	38	93	68.4	2.44	51.0
February.....	360	1,274	82.0	3.53	50.8
March.....	460	1,458	89.5	3.56	51.9
April.....	531	1,127	63.8	2.12	58.0
May.....	604	1,201	73.6	1.98	58.4
June.....	739	2,534	75.2	3.42	61.6
July.....	617	1,497	77.1	2.42	63.8
August.....	447	1,232	82.3	2.75	61.8
September.....	317	903	82.6	2.82	62.8
October.....	321	1,213	86.9	3.77	58.8
November.....	296	811	81.0	2.77	53.3
December.....	237	328	70.8	1.38	47.9
Total.....	4,916	13,671			

Percentage of rats with fleas entire year..... 77.7  
Average fleas per rat entire year..... 2.78

In the Annual Report of the Surgeon General of the United States Public Health Service (3) for the year ended June 30, 1916, it is stated that in New Orleans, La., 1,268 rats were examined for fleas and that 4,394 fleas were obtained, being an average of 3.46 fleas per rat. Of these fleas, 3,256 were *Xenopsylla cheopis*, 88 were *Ceratophyllus fasciatus*, 1,263 were *Leptopsylla musculi*, 125 were *Ctenocephalus canis*, and 47 were *Pulex irritans*. The report states:

Two conditions of considerable interest have developed during the year. One is the marked rise in the number of plague rats during May, and more particularly in June, 1916, contemporaneously with a marked increase in the number of rat fleas (particularly *Xenopsylla cheopis*) per rat. It is believed that there is a distinct relationship between these two phenomena.

The figures for May and June, 1916, are as follows:

Date	Mus norvegicus		Mus rattus and alexandrinus	
	X. cheopis	C. fasciatus	X. cheopis	C. fasciatus
Week ended—				
May 6.....	2.763	0.526		
May 13.....	1.033		1.500	
May 20.....	3.000		1.500	
May 27.....	2.025	.050	4.000	
June 3.....	2.666	1.000	4.000	
June 10.....	3.609	.024	8.000	
June 17.....	7.666		1.570	
June 24.....	6.930		7.833	
Six days ended June 30.....	6.148		3.000	

The Annual Report of the Surgeon General of the Public Health Service (4) for the fiscal year ended June 30, 1917, states that in New Orleans in June, 1917, the average number of fleas per rat was 3, as against 7 in June, 1916, a reduction of 4 fleas per rat. This was accompanied by a reduction in the number of plague-infected rats caught. *Xenopsylla cheopis* continued to be the predominating flea.

The Annual Report of the Surgeon General (5) for the fiscal year ended June 30, 1921, states that in New Orleans there were 2,144 live rats examined for fleas, with an average of 3.3 fleas per rat, and that rat plague was present.

In New Orleans during the fiscal year 1922 (6) there were 3,839 live rats examined for fleas and 17,559 fleas were taken, of which 6,566 were *Xenopsylla cheopis*, 10,269 were *Leptopsylla musculi*, and 724 were *Ctenocephalus canis*, making an average of 4.83 per rat. Figures by months are as follows:

Mean	Mean temperature	Total rats examined	Total fleas examined	Fleas per rat	Mean	Mean temperature	Total rats examined	Total fleas examined	Fleas per rat
1921					1922				
July.....	83.1	227	963	4.3	January.....	83.5	194	586	3.0
August.....	84.2	183	747	4.8	February.....	62.2	251	979	3.9
September.....	83.4	None	None	None	March.....	62.3	606	2,895	4.8
October.....	71.2	41	147	3.6	April.....	72.6	723	3,534	4.9
November.....	66.6	159	315	1.9	May.....	75.7	808	4,301	4.8
December.....	60.8	83	260	3.1	June.....	81.8	490	2,206	4.5

The Annual Report of the Surgeon General for the fiscal year ended June 30, 1921 (5), states that in Pensacola, Fla., there were 36 plague-infected rats found during that fiscal year. The average number of fleas per rat for the year was 11.3. The total number of fleas was 8,603, of which 4,640 were *Xenopsylla cheopis*, 1,989 were *Pulex irritans*, 1,101 were *Ctenocephalus canis* or *felis*, 657 were *Ceratophyllus fasciatus*, and 216 were *Leptopsylla musculi*.

The Annual Report of the Surgeon General for the fiscal year ended June 30, 1922 (6), states that in Galveston, Tex., during that year the average number of fleas per rat was 24.66, of which *Xenopsylla cheopis* predominated and that *Ceratophyllus fasciatus* was not encountered.

A rat flea survey was made in Providence, R. I. (7, 8), by Robinson in 1912 from July through to December. Three hundred and forty-two rats were examined, 57 per cent of which were found to harbor fleas. A total of 2,053 fleas were taken, of which 75 per cent were *Xenopsylla cheopis*, 22 per cent were *Ceratophyllus fasciatus*, 2.5 per cent were *Leptopsylla musculi*, and 0.5 per cent were *Ctenocephalus canis*. The average number of fleas per rat from July to September was 10.2, and from October to December the average was 3.7. For a restaurant where 40 rats were taken, the average was 36 fleas per rat. The largest number of fleas obtained from one rat was 300. The rats when caught were carried to the laboratory without inclosing the cages in canvas bags to prevent the possible escape of fleas.

In a report on rat fleas in Suffolk and North Essex, England, Strickland and Merriman (9) did not encounter any *Xenopsylla cheopis*, but *Ceratophyllus fasciatus* was common (60 per cent). Thirty-eight per cent of the fleas were *Ctenophthalmus agyrtes*, a flea of the field mouse. Some of their findings were as follows: In all, 822 rats were examined. The average number of fleas per rat was almost exactly 4, 3,293 fleas being collected. There was a definite seasonal variation in the number of fleas per rat and in the percentage of rats infested with fleas. There was a corresponding variation in the maximum and minimum temperatures in grass thermometer readings and in the atmospheric humidity.

Newstead and Evans (10) report after a rat-flea survey of Liverpool, England, that 944 rats were caught with 2,339 fleas, making an average of 2.47 fleas per rat. Of these fleas, 1,905 were *Ceratophyllus fasciatus* and 73 were *Xenopsylla cheopis*. Of the latter, 56 were taken from the same house. The number of fleas per rat was greatest during the summer months, but the curve of frequency could not be correlated in detail with that of the average temperature. In addition to the above, 469 rats having 716 fleas were caught on ships in the port. Of these fleas, 489 were *Xenopsylla cheopis*, 219 were *Ceratophyllus fasciatus*, and 8 were *Leptopsylla musculi*.

It is stated (11) that in Belgaum, India, plague can assume epidemic proportions only from July to November, when rat fleas are most prevalent, averaging during July, August, and September, 18 fleas per rat, whereas in nonepidemic periods the average is but 4 or 5 fleas per rat.

The results of some of the studies bearing on the subject of life histories and longevity of fleas are briefly as follows:



With reference to the influence of saturation deficiency and of temperature on the course of epidemic plague, Brooks (12) summarizes his findings as follows:

"1. Plague does not maintain itself in epidemic form when the temperature rises above 80° F., accompanied by a saturation deficiency of over 0.30 of an inch.

"2. Plague epidemics are rapidly brought to an end in the presence of a high saturation deficiency, even when the mean temperature throughout and after the termination of the epidemic has been considerably below 80° F.

"3. Plague epidemics may commence to increase in intensity when the mean temperature is well above 80° F., provided that the saturation deficiency is below 0.30 of an inch.

"4. In some districts in India and in certain tropical islands (e. g., Java, Mauritius) where the climatic conditions are at all times of the year favorable to the incidence and spread of plague, the disease may occur indifferently at all seasons."

Bacot (13) has shown that to induce the ova of *Xenopsylla cheopis* to hatch a temperature of over 60° F. is apparently necessary, and that *Ceratophyllus fasciatus* can hatch at an average temperature of 41° F., but that *Pulex irritans* can not. He states that in the larval stage *Xenopsylla cheopis* and *Pulex irritans* can not survive below 40° F., but that *Ceratophyllus fasciatus* is not only able to endure this temperature, but apparently finds it quite suited to its needs. In the pupal stage, at 40° to 43° F., the results were similar to those obtained with the larva. *Pulex irritans* seems to have a greater endurance in this stage than *Xenopsylla cheopis*. In the adult stage all species are more nearly alike. Bacot further states that at 45° to 50° F., with nearly saturated air, fleas can live for many days unfed—*Pulex irritans* for 125 days, *Ceratophyllus fasciatus* for 95 days, *Xenopsylla cheopis* for 35 days, *Ctenocephalus canis* for 58 days, and *Ceratophyllus gallinae* for 127 days. Kept in the ice box and fed on a natural host, *Pulex irritans* may live for upward of 513 days, *Ceratophyllus fasciatus* for 106 days, *Xenopsylla cheopis* for 100 days. Under natural conditions they would probably live longer. *Ctenocephalus canis* lived 234 days and *Ceratophyllus gallinae* lived 345 days. Allowing for the longest recorded time that an unfed adult lives, there is no difficulty in accounting for active adult fleas being found, under favorable situations, where there have been no hosts for considerable periods—*Ceratophyllus fasciatus* for 22 months, *Pulex irritans* for 19 months, *Xenopsylla cheopis* for 10 months, *Ctenocephalus canis* for 18 months, and *Ceratophyllus gallinae* for 12 months.

In a careful study made by Bacot and Martin (14) on the respective influence of temperature and moisture upon the survival of the

rat flea (*Xenopsylla cheopis*) away from its host and without any other source of food they have drawn the following conclusions:

"1. The survival of fleas (*Xenopsylla cheopis*) apart from their host is approximately in inverse proportion to the saturation deficiency of the air, provided the temperature and air movement are constant. In other words, it is proportionate to the rate at which they lose water.

"2. Under similar conditions but with constant saturation deficiency their length of life is reduced to between one-half and two-thirds by 10° C. rise in temperature. Compared with the effect of saturation deficiency, that of temperature upon the longevity of fleas is, within the range of climatic conditions over the greater part of India, a smaller one.

"3. A variation in saturation deficiency from 5 millimeters to 35 millimeters, such as occurs in the plains of northern India at different seasons, would accordingly shorten the average duration of life of wandering rat fleas in the proportion of 15 to 1. As a rise in mean temperature occurs simultaneously with the increase in saturation deficiency and may amount to a difference of 20° C. between January and June, this would reduce the length of life of wandering fleas to about one-third. The effect of saturation deficiency and increased temperature will be additive and would go a long way to explain some of the climatological features of the epidemic."

Strickland (15) places the time necessary for the complete development of *Ceratophyllus fasciatus* from egg to imago as being 84 days, or seven days for the egg to hatch, 60 days in the larval stage, and 17 in the pupal stage.

Investigations in India show (16) that egg laying and the stages of development into larvae, pupae, and adults all show marked seasonal variation, most active when weather is wet and temperature moderate, least active under dry and hot conditions. Atmospheric humidity seems to be more important than temperature in determining this seasonal variation. The life of the adult flea is longer in cool and moist atmosphere than under hot and dry conditions.

Nicoll states (17) that the larval and nymphal stages of *Ceratophyllus fasciatus* can live for much longer periods than normal under certain conditions, from two to six weeks normally to over a year.

Investigations on plague in India (18) show that *Xenopsylla cheopis* can live for at least 41 days when its food supply is derived from a rat. It can survive for 27 days when fed on human blood. Under the most favorable conditions from 21 to 22 days were necessary for the completion of the life cycle. A high mean temperature restrains the adult from laying eggs and is also deleterious to the development of the eggs into larvae.

Thompson (19) reports that in Australia, March, April, and May were the months in which plague was most active in both rat and

man, i. e., the height of the epidemic period coincided nearly with the epizootic period.

In a report of plague investigations in India it is stated that the longest life of a flea is in August, when the humidity is over 80 per cent, whereas the shortest life is in April and first half of May, when the humidity is about 40 per cent or less. Fleas were found to live about five times longer in August than in April under the conditions observed in the experiment.

Major Cragg (20) has shown that in those parts of India which do not have epidemics of plague the predominating rat flea is not *Xenopsylla cheopis*, but other species of *Xenopsylla*, either *Xenopsylla astia* or *Xenopsylla brasiliensis*. *Xenopsylla astia* is also the common rat flea of Colombo, and it is well known that the city enjoys a relative immunity to plague.

Chick and Martin (21) state that *Xenopsylla cheopis* and *Ceratophyllus fasciatus* are the species of rat fleas which, when hungry, readily bite man. There is no reason to suppose that, other things being equal, *Ceratophyllus fasciatus* would not be as efficient an agent in the transmission of plague from rat to man as *Xenopsylla cheopis* has been shown to be in India.

That rat fleas will bite man has been demonstrated by various investigators, including Gauthier and Raybaud, Tidswell, Tiraboschi, Liston, the British Indian Plague Commission, Wherry, and McCoy and Mitzmain (22). The last three proved that fleas of the California ground squirrel would also bite man.

#### Scope of Present Study and Method of Procedure

To date, surveys to obtain fleas from live rats have been made by officers of the Public Health Service in cooperation with the local health authorities and with the approval of the State health authorities at the ports of Boston, Mass., New York, N. Y., and New Orleans, La. The work in the field in each of these surveys consisted of the trapping of live rats and the collection at the local laboratory of the fleas from these rats. The fleas have been properly preserved and later identified as to species. Care was taken to make a careful record of the location (street and number) at which each rat was caught, so that the corresponding flea data might be properly recorded for subsequent study.

In New York City the rat survey started April 18, 1923, and continued until February 28, 1925. The work of trapping the rodents was done by the rat trappers of the New York City health department. The collecting of the fleas was done by the laboratory personnel of the health department, the material thus obtained being turned over to the Public Health Service for identification.

The survey in Boston commenced December 1, 1922, and continued to November 10, 1923. The work of trapping the rodents was done by two experienced rat trappers of the Public Health Service until September 10, 1923, after which date the trapping of live rats was done by rat trappers in the employ of the Boston health department. The rats were delivered in the cages in which they were caught to the laboratory of the Boston quarantine station, where the fleas were collected from them by a Public Health Service bacteriologist. During the winter months this latter work was conducted at the Bussey Institute of Entomology, owing to transportation difficulties involved in reaching the quarantine station.

The New Orleans survey commenced November 1, 1922, and continued to June 15, 1923. This work was carried out entirely by Public Health Service personnel at the plague suppressive station then being maintained in that city.

The trapping of the rats was done by means of large wire cage traps which were placed in considerable numbers in the various localities or zones from which it was desired to obtain the rats. An effort was made to obtain what might be termed representative samples of the rat population. The rats after being trapped were delivered to the laboratory in the traps in which originally caught, care being taken to disturb the rat or rats in each cage as little as possible, so as not to affect the flea distribution and prevalence on the rats. The traps were not inclosed in canvas bags while being taken to the laboratory.

The method of obtaining fleas from a rat after delivery to the laboratory was as follows:

The rat is removed from the cage with any suitable forceps and is then killed by being caught around the neck with a hysterectomy forceps. This is done while holding the rat over a white enameled tray about 2 feet square containing about an inch of water. The rat is immediately suspended over the center of the tray and allowed to remain there for 24 hours. As the rat gradually becomes cold after death, the fleas leave it in search of another host. Since the leap or hop of a flea very rarely exceeds 8 or 10 inches, the fleas fall upon the water in the tray and float upon the surface. As all the fleas have left the dead rat at the end of the 24-hour period, they are easily collected from the surface of the water at that time with the aid of a magnifying glass. The fleas are then placed in a small bottle containing alcohol and labeled with the rodent serial number and other pertinent data. At intervals the vials thus obtained were shipped to the senior author of this report at Philadelphia, Pa., and their contents studied.

The Public Health Service is indebted to the health departments of the cities of New York and Boston for their assistance in making



the work possible, and to Dr. William Pepper, dean of the Medical School, and Dr. Allen J. Smith, professor of pathology of the University of Pennsylvania, for their kindness in furnishing laboratory space to carry on the determination of the material collected. Acknowledgment is also due to the Bussey Institute of Entomology of Harvard University for laboratory space furnished during the winter of 1922-23.

### Results of Present Studies

#### NEW YORK

The survey in New York extended from April 18, 1923, to February 28, 1925. The number of rats caught each month varied. Four thousand seven hundred and fifty-six rats were trapped, of which 1,426, or 30 per cent, harbored fleas. The total number of fleas collected was 4,408, of which 70.7 per cent were *Ceratophyllus fasciatus* and 23.4 per cent were *Xenopsylla cheopis*. The average number of fleas per rat for the entire period was 0.93. *Xenopsylla cheopis* was not confined to the water front, but was taken well within the city. However, the city of New York in the area trapped is not wide and a rat can travel across it with ease from one water front to the other. The largest number of fleas obtained from one rat was 38, all of which were *Ceratophyllus fasciatus*.

Table 1 gives information in detail by months. It will be noted that at no time did the number of rats having fleas exceed 50.3 per cent of those trapped, and that at no time did the monthly average number of fleas per rat reach 3.0. During the year 1923 the average number was 1.6, and during the year 1924 the average number was 0.5.

TABLE 1.—Data relative to rat-flea survey in New York City (April 18, 1923, to February 28, 1925)

	1923									
	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Total rats caught.....	65	292	138	326	282	324	250	133	166	
Number having fleas.....	29	147	68	132	118	156	105	65	58	
Per cent having fleas.....	44.6	50.3	49.3	40.5	41.8	48.3	42.0	48.8	35.0	
Total fleas taken.....	95	618	257	620	367	414	434	203	153	
<i>C. fasciatus</i> .....	95	611	241	346	192	156	114	107	106	
<i>X. cheopis</i> .....	0	7	16	252	62	231	313	82	46	
<i>L. muscull.</i> .....	0	0	0	17	86	2	0	14	0	
<i>Ct. canis or felis</i> .....	0	0	0	5	27	25	7	0	1	
<i>Echid. gallinacea</i> .....	0	0	0	0	0	0	0	0	0	
Average fleas per rat.....	1.46	2.11	1.96	1.90	1.30	1.28	1.74	1.52	0.92	
Per cent <i>C. fasciatus</i> .....	100.0	98.8	94.0	55.8	52.5	37.7	26.2	52.7	70.0	
Per cent <i>X. cheopis</i> .....	0.0	1.1	6.0	40.6	16.8	55.8	72.1	40.4	30.0	



TABLE 1.—Data relative to rat-flea survey in New York City (April 18, 1923, to February 28, 1925)—Continued

	1924											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Total rats caught.....	18	201	256	303	213	310	266	45	140	108	210	303
Number having fleas.....	9	22	31	29	76	108	66	8	51	22	37	33
Per cent having fleas.....	50.0	10.9	12.1	9.6	35.7	34.8	24.6	17.8	36.4	20.4	17.6	10.9
Total fleas taken.....	13	31	36	34	158	446	209	19	90	37	60	46
<i>C. fasciatus</i> .....	10	29	33	31	139	430	189	14	85	32	45	45
<i>X. cheopis</i> .....	0	0	0	1	0	1	4	1	0	2	14	0
<i>L. musculi</i> .....	3	2	3	2	19	15	14	0	0	1	0	1
<i>Ct. canis or felis</i> .....	0	0	0	0	0	0	1	4	4	2	1	0
Echid, gallinacea.....	0	0	0	0	0	0	1	0	1	0	0	0
Average fleas per rat.....	0.72	0.15	0.14	0.11	0.74	1.44	0.78	0.42	0.64	0.34	0.29	0.15
Per cent <i>C. fasciatus</i> .....	76.9	93.6	91.7	91.2	88.0	96.4	90.4	73.7	94.4	86.5	75.0	97.8
Per cent <i>X. cheopis</i> .....	0.0	0.0	0.0	2.8	0.0	0.2	1.9	5.3	0.0	5.4	23.3	0.0

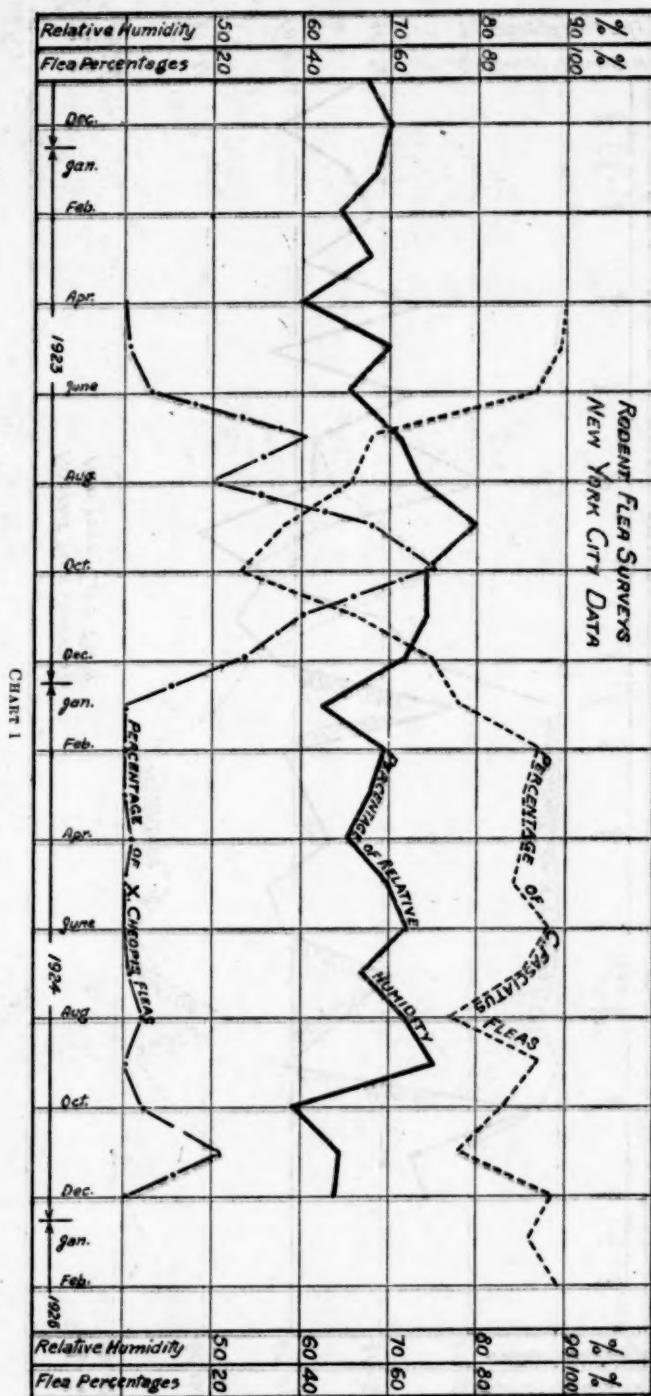
  

	1925		Total
	Jan.	Feb.	
Total rats caught.....	193	214	4,756
Number having fleas.....	13	43	1,426
Per cent having fleas.....	6.7	20.1	30.0
Total fleas taken.....	13	55	4,408
<i>C. fasciatus</i> .....	12	54	3,117
<i>X. cheopis</i> .....	0	0	1,032
<i>L. musculi</i> .....	1	1	181
<i>Ct. canis or felis</i> .....	0	0	77
Echid, gallinacea.....	0	0	2
Average fleas per rat.....	0.07	0.26	0.93
Per cent <i>C. fasciatus</i> .....	92.3	98.8	70.7
Per cent <i>X. cheopis</i> .....	0.0	0.0	23.4

## Summary

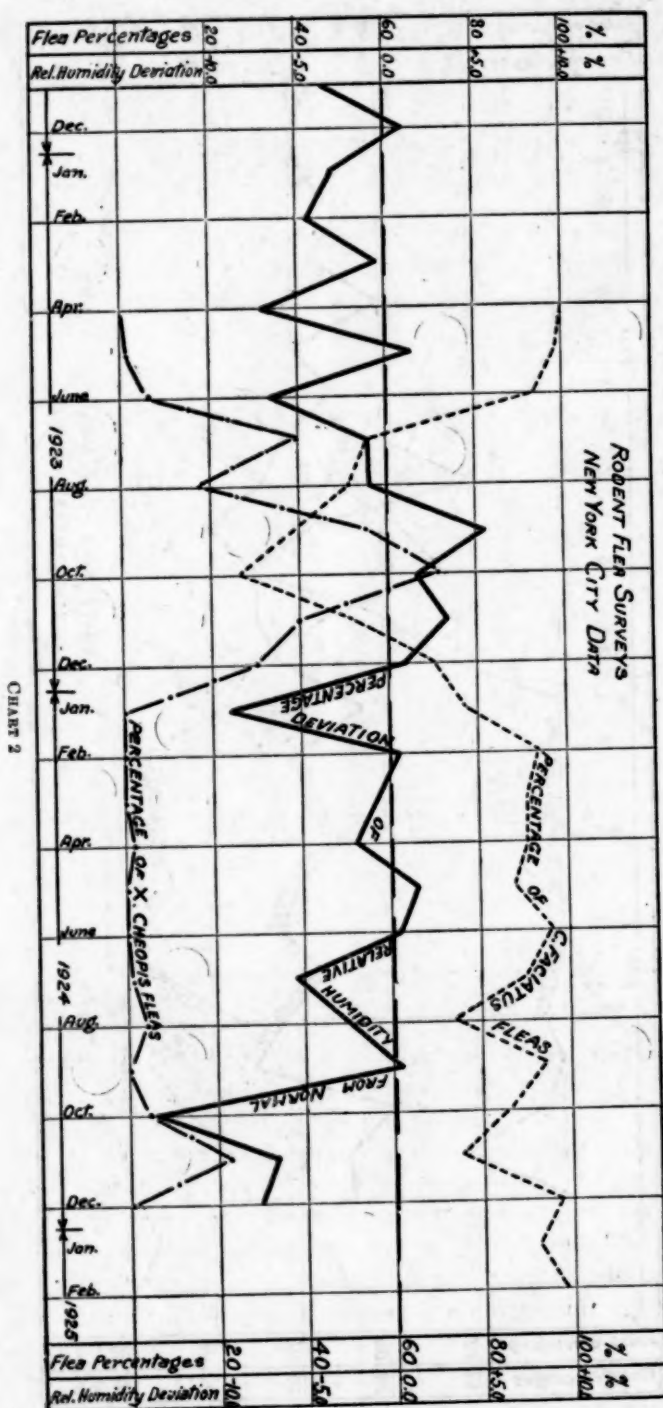
Year	Total rats	Total fleas	Average fleas per rat	<i>X. cheopis</i>	Per cent <i>X. cheopis</i>
1923.....	1,976	3,161	1.60	1,009	31.6
1924.....	2,373	1,179	0.50	23	1.9

*Xenopsylla cheopis* furnished more than 50 per cent of the fleas during September and October, 1923, after which time their number rapidly decreased to practically a negligible quantity and remained low during the entire year 1924 except for the month of November when there was a rise to 23.3 per cent of the monthly catch. On the other hand, during 1924, *Ceratophyllus fasciatus* increased in numbers in May, June, and July, just as it did in 1923, but the numbers of this species were comparatively few during the remainder of the year. Only one species of the genus *Xenopsylla* was encountered during the survey, namely, *Xenopsylla cheopis*. In Charts 1 and 2 an attempt is made to show a correlation between atmospheric humidity and the prevalence of *Xenopsylla cheopis*. It is to be noted that from July to November, 1923, the months during which *Xenopsylla cheopis* was most prevalent, the relative humidity remained between 70 and 80, although the average temperature during October had dropped to



September 11, 1925

1920



56° F. During the entire year 1924 the relative humidity was comparatively low. The highest average was 75 in September, but during most of the year it deviated below the normal. Except for a slight rise in the number of *Xenopsylla cheopis* collected in November, this species can practically be disregarded during 1924.

## BOSTON

In Boston (Table 2) the study extended from December 1, 1922, to November 13, 1924. One thousand five hundred and twenty-four rats were caught, of which 648, or 42.5 per cent harbored fleas. The average number of fleas per rat was well under 1.0 until June, when

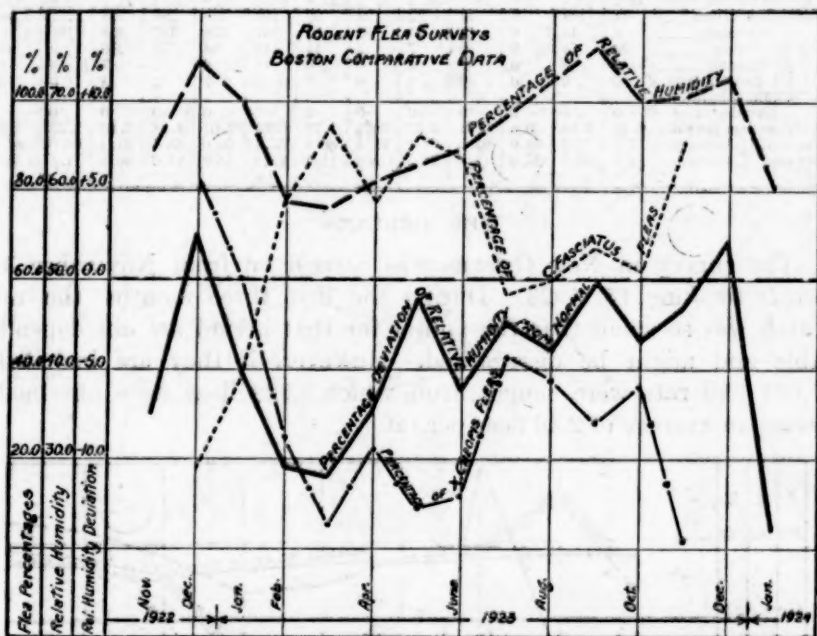


CHART 3

it reached 1.37 and remained above 1.0 up to and including November. At no time did the average reach 3.0 fleas per rat. The average number of fleas per rat for the entire period was 1.25. The total number of fleas obtained was 1,901. The per cent of *Xenopsylla cheopis* for the entire period was 33.2. The curve representing *Xenopsylla cheopis* was not so consistent as that for New York, although it follows more or less closely the curve representing relative humidity (Chart 3). The months of December and January show a high percentage of *Xenopsylla cheopis*. They then diminished in numbers until the season that one would expect to find them most prevalent, namely, June to October, although they never reached 50 per cent of the total catch. In November they had dropped to only 1.8 per cent of the catch, *Ceratophyllus fasciatus*

remaining comparatively high. The only member of the genus *Xenopsylla* encountered was *cheopis*. The greatest number of fleas obtained from one rat was 67, 10 of which were *Xenopsylla cheopis* and the remainder *Ceratophyllus fasciatus*.

TABLE 2.—Data relative to the rat-flea survey in Boston, Mass. (December 1, 1922, to November 10, 1923)

	1922	1923											Total
	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	
Total rats caught.....	41	172	124	128	56	94	70	118	215	208	208	90	1,524
Number having fleas.....	5	26	7	25	20	18	25	81	89	132	149	71	648
Per cent having fleas.....	12.2	15.1	5.6	19.5	35.6	19.2	35.8	68.6	41.4	63.4	71.7	78.8	42.5
Total fleas taken.....	34	118	8	44	32	58	96	282	230	288	595	111	1,901
C. fasciatus.....	6	44	6	42	25	53	83	162	138	197	368	101	1,225
X. cheopis.....	28	74	2	2	7	5	11	119	88	78	216	2	632
L. musculi.....	0	0	0	0	0	0	0	1	2	1	7	8	19
Ct. canis or felis.....	0	0	0	0	0	0	0	0	2	12	4	0	23
Ctenophthalmus pseudagyrtus.....	0	0	0	0	0	0	2	0	0	0	0	0	2
Average fleas per rat.....	0.83	0.69	0.6	0.34	0.57	0.62	1.37	2.39	1.07	1.38	2.86	1.23	1.25
Per cent C. fasciatus.....	17.6	37.3	75.0	95.5	78.1	91.4	86.4	57.4	60.0	68.4	61.8	91.0	64.4
Per cent X. cheopis.....	82.4	62.7	25.0	4.5	21.9	8.6	11.4	42.2	38.2	27.0	36.3	1.8	33.2

#### NEW ORLEANS

The survey in New Orleans was carried on from November 1, 1922, to June 15, 1923. During the first three months the rat catch was so small that the figures for that period are not dependable and might be disregarded. However, if they are included, 1,661 live rats were caught, from which 3,928 fleas were obtained, being an average of 2.36 fleas per rat.

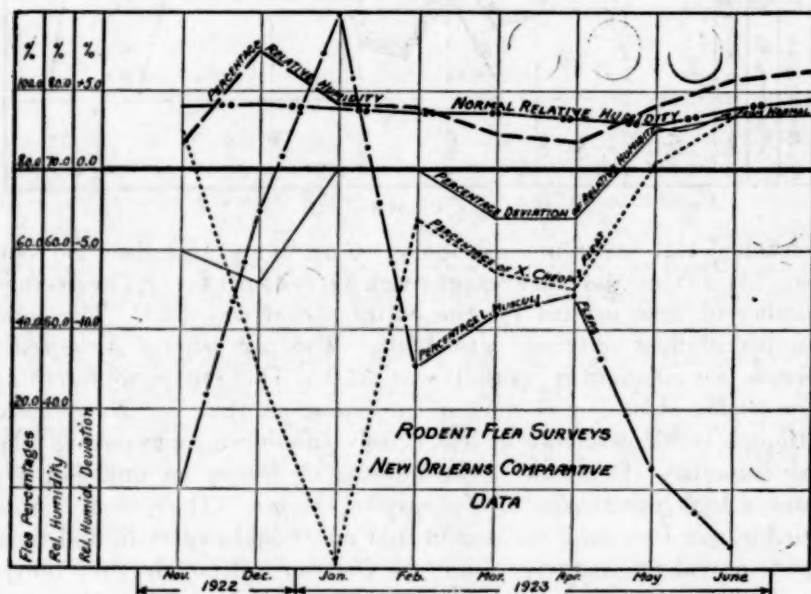


CHART 3



Two thousand eight hundred twenty-nine fleas, or 72.0 per cent, were *Xenopsylla cheopis*; 1,049 fleas or 26.6 per cent were *Leptopsylla musculi*, while there were only 18 *Ceratophyllus fasciatus*, or 0.5 per cent. These figures agree very well with those obtained during previous surveys in New Orleans, already mentioned in this report. Detailed information by months concerning the New Orleans survey is to be found in Table 3. From Chart 4 it may be noted that the variations in the percentages of *Xenopsylla* correspond fairly closely to variations in atmospheric humidity.

TABLE 3.—Data relative to the rat flea survey in New Orleans, La. (November 1, 1922, to June 15, 1923)

	1922		1923							Total
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June		
Total rats caught.....	33	4	1	289	454	309	367	204	1,691	
Number having fleas.....	33	4	1	289	417	191	320	189	1,444	
Per cent having fleas.....	100	100	100	100	91.8	61.8	87.2	92.6	86.9	
Total fleas taken.....	154	29	12	941	1,023	174	909	686	3,928	
<i>C. fasciatus</i> .....	0	0	0	4	12	0	2	0	18	
<i>X. cheopis</i> .....	138	9	0	642	556	89	750	645	2,829	
<i>L. musculi</i> .....	16	20	12	288	448	84	142	39	1,049	
<i>Ct. canis or felis</i> .....	0	0	0	2	7	0	9	2	20	
<i>Echid. gallinacea</i> .....	0	0	0	5	0	1	6	0	12	
Average fleas per rat.....	4.67	7.25	12.0	3.26	2.25	0.56	2.48	3.36	2.36	
Per cent <i>C. fasciatus</i> .....	0.0	0.0	0.0	0.4	1.2	0.0	0.2	0.0	0.5	
Per cent <i>X. cheopis</i> .....	89.6	31.0	0.0	68.2	54.4	51.1	82.6	94.0	72.0	
Per cent <i>L. musculi</i> .....	10.4	69.0	100	30.6	43.8	48.3	15.6	5.7	26.6	

#### DATA BY ZONES

In tables 4, 5, and 6 the flea survey data obtained from New York City, Boston, and New Orleans are tabulated by zones, although for New Orleans certain of the data are lacking. The zones were determined by dividing the cities into sections, which seemed to be logical arbitrary divisions. Examination of these tables shows that none of the rats from which the fleas were obtained was trapped on vessels except in New Orleans. In New York City, 26.8 per cent of the rats trapped on docks or wharves had fleas; 30.9 per cent of those trapped in warehouses adjacent to docks or wharves had fleas, and 49.5 per cent trapped elsewhere in the city had fleas. Similarly in Boston, 30.8 per cent of the rats trapped on wharves or docks carried fleas; 30.9 per cent of those trapped in warehouses adjacent to the waterfront had fleas, 57.3 per cent of those trapped elsewhere in the city carried fleas, and 25.6 per cent of the rats trapped in the suburbs had fleas.

TABLE 4.—New York City flea survey data by zones

	Zone <sup>1</sup>					Total
	1	2A	2B	3	4	
Total rats.....		3,660	488	608		4,756
Rats having fleas.....		974	151	301		1,426
Per cent having fleas.....		26.8	30.9	49.5		30.0
Total fleas.....		2,673	629	1,106		4,408
<i>C. fasciatus</i> .....		1,874	431	812		3,117
<i>X. cheopis</i> .....		578	179	275		1,032
Other fleas.....		222	18	20		260
Average fleas per rat.....		0.73	1.29	1.82		0.93
Per cent <i>C. fasciatus</i> .....		70.2	68.6	73.5		70.7
Per cent <i>X. cheopis</i> .....		21.7	28.5	24.9		23.4

<sup>1</sup> Zones:

Zone 1: Vessels, foreign and coastwise, entering the port.

Zone 2A: The wharves and docks of the waterfront.

Zone 2B: The warehouses along the water front.

Zone 3: The remainder of the city, except the suburbs or country portion.

Zone 4: The suburbs or country portion.

TABLE 5.—Boston flea survey data by zones

	Zone <sup>1</sup>					Total
	1	2A	2B	3	4	
Total rats.....		536	178	697	113	1,524
Rats having fleas.....		165	55	399	29	648
Per cent having fleas.....		30.8	30.9	57.3	25.6	42.5
Total fleas.....		478	124	1,233	66	1,901
<i>C. fasciatus</i> .....		317	93	752	63	1,225
<i>X. cheopis</i> .....		144	30	457	1	632
Other fleas.....		17	1	24		44
Average fleas per rat.....		0.89	0.70	1.77	0.58	1.25
Per cent <i>C. fasciatus</i> .....		66.3	75.0	60.9	95.4	64.4
Per cent <i>X. cheopis</i> .....		30.1	24.2	37.2	1.5	33.2

<sup>1</sup> Zones defined in Table 4.

TABLE 6.—New Orleans flea survey data by zones

	Zone <sup>1</sup>					Total
	1	2A	2B	3	4	
Total rats.....	12					1,661
Rats having fleas.....	1	1	80	1,091	277	1,444
Per cent having fleas.....	8.3					86.9
Total fleas.....	1	9	213	3,336	369	3,928
<i>C. fasciatus</i> .....		1	5	10	2	18
<i>X. cheopis</i> .....		1	46	2,531	251	2,829
<i>L. musculi</i> .....	1	7	161	767	113	1,049
Other fleas.....			1	28	3	32
Average fleas per rat.....	0.08					2.36
Per cent <i>C. fasciatus</i> .....		11.1	2.5		0.5	0.5
Per cent <i>X. cheopis</i> .....		11.1	21.6	75.8	68.0	72.0
Per cent <i>L. musculi</i> .....	100.0	77.8	75.7	23.0	30.6	26.6

<sup>1</sup> Zones defined in Table 4.

It is to be noted that for New Orleans, in zones 2A and 2B, consisting of the docks and warehouses adjacent, at least 75 per cent of the fleas obtained from the rats were *Leptopsylla musculi*, whereas for the remainder of the city and suburbs more than 68 per cent of the

fleas obtained were *Xenopsylla cheopis*. This variation in prevalence by zones was not found in New York and Boston, where *Ceratophyllus fasciatus* (replaced by *Leptopsylla musculi* in New Orleans) was the species most commonly found.

#### OTHER ECTOPARASITES ENCOUNTERED

No *Pulex irritans* were taken either in the New York or Boston surveys. It is a species of flea rarely found in the northeastern part of the United States, but common on the Pacific coast, and has also been taken from rats in New Orleans and Pensacola.

In addition to the fleas collected and reported in Tables 1 and 2, the following parasites were taken:

*Polyplax spinulosa* Burmeister (the common rat louse).

*Philandesia foxi* Ewing (one specimen from *Mus norvegicus*, New York City).

*Laelaps echidninus* Berlese (the common rat mite).

*Laelaps hawaiiensis* Ewing (New York City and New Orleans from *rattus*).

*Bdella cardinalis* Banks (New York City. Accidentally on *M. norvegicus*).

For the identifications of the above ectoparasites acknowledgment is due Dr. H. E. Ewing, of the Bureau of Entomology, United States Department of Agriculture.

#### Conclusion

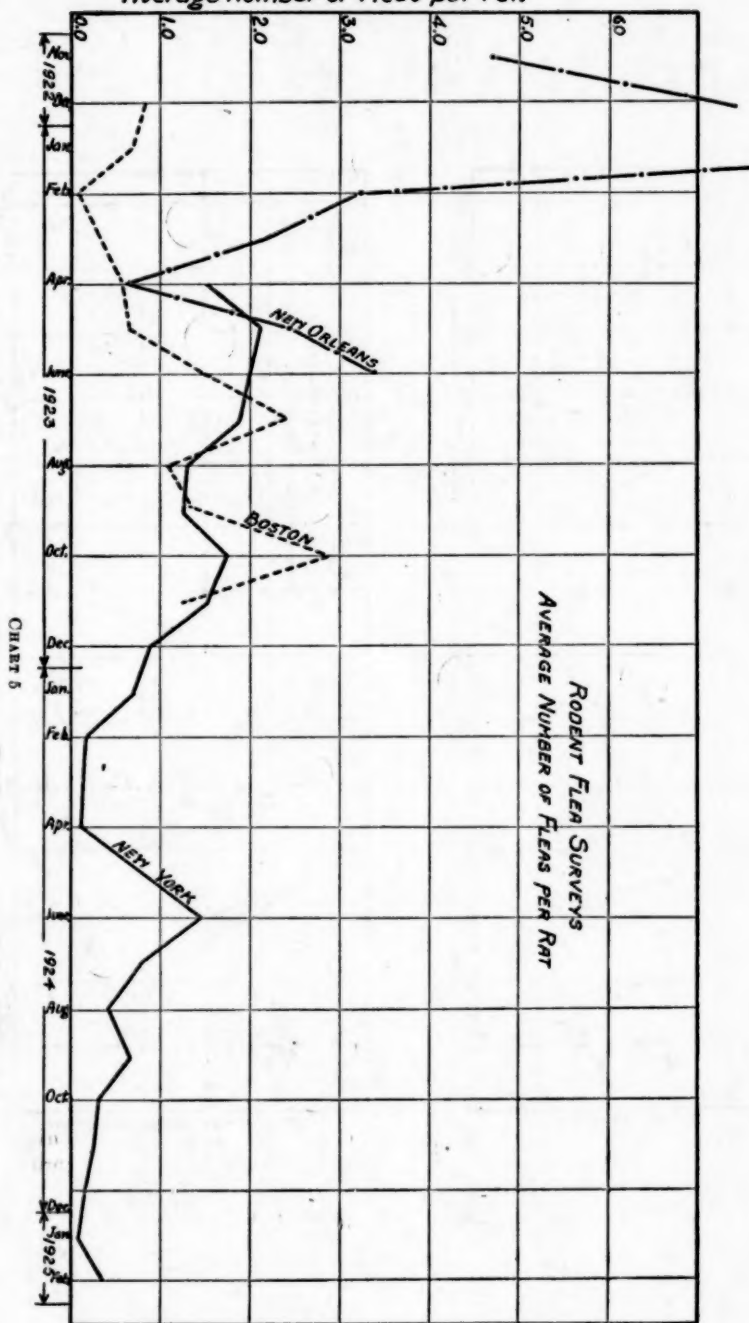
The authors do not feel that it is advisable to draw any definite conclusions from the surveys. It is quite significant, however, that in New Orleans, where plague has actually existed, *Xenopsylla cheopis* is the predominant rat flea present during every month of the year, and that *Ceratophyllus fasciatus* is practically absent while, in the northern cities under study, where plague has never existed, *Ceratophyllus fasciatus* is the predominant rat flea, *Xenopsylla cheopis* appearing in greater numbers only during a few months of the year. It is also significant that in New Orleans the average number of fleas per rat is consistently high as compared with the average number in New York and Boston. It is also felt that temperature and humidity are important factors in the average number of fleas per rat as well as in the numbers of *Xenopsylla cheopis*.

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Average number of fleas per rat.





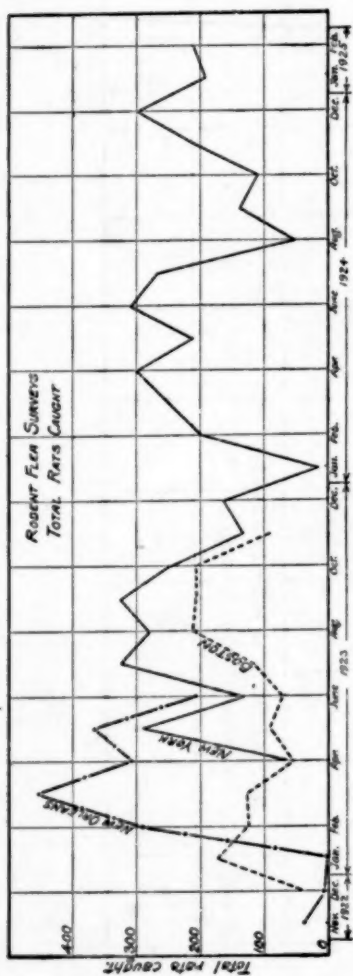


CHART 6

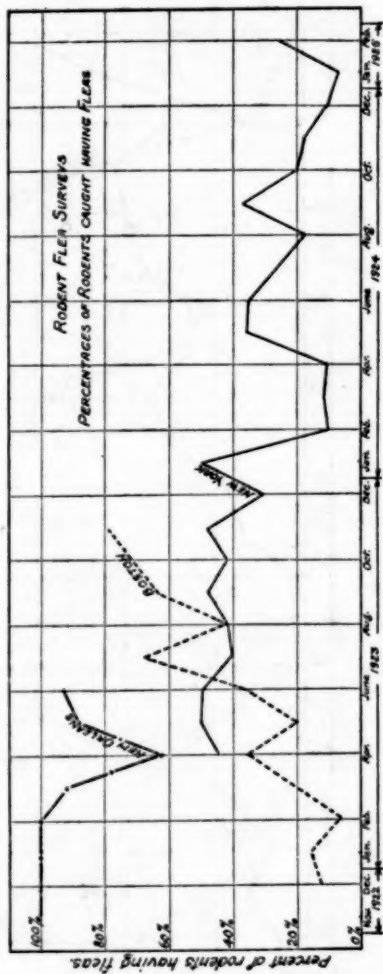
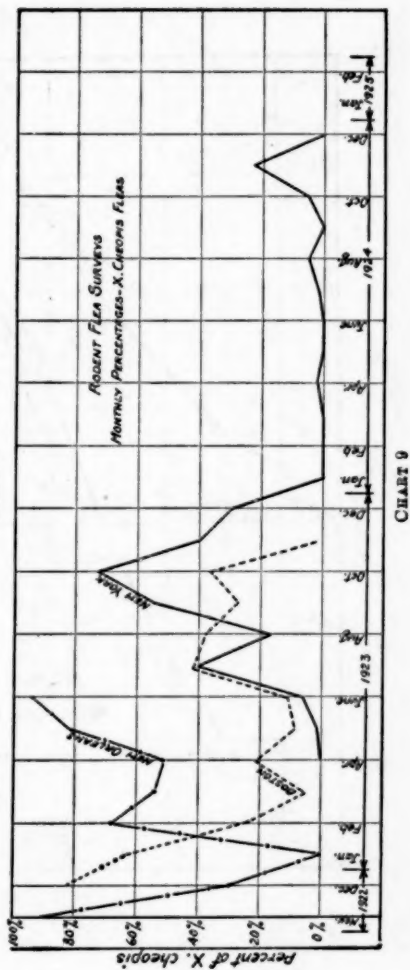
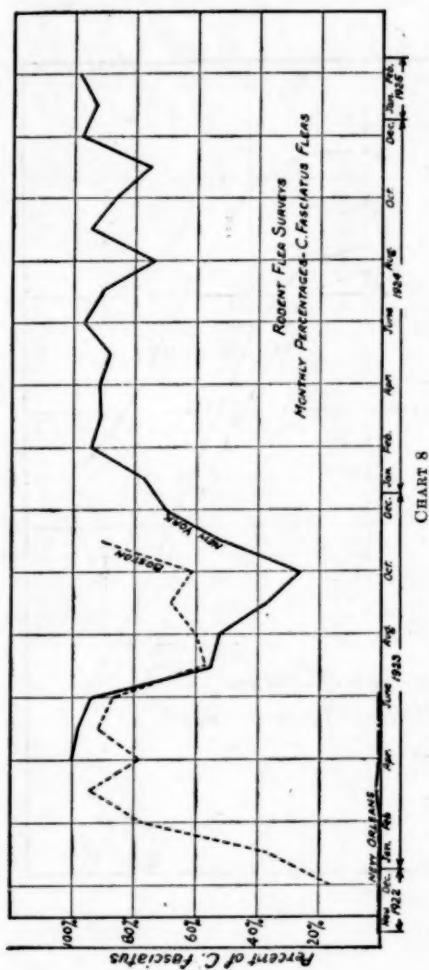


CHART 7



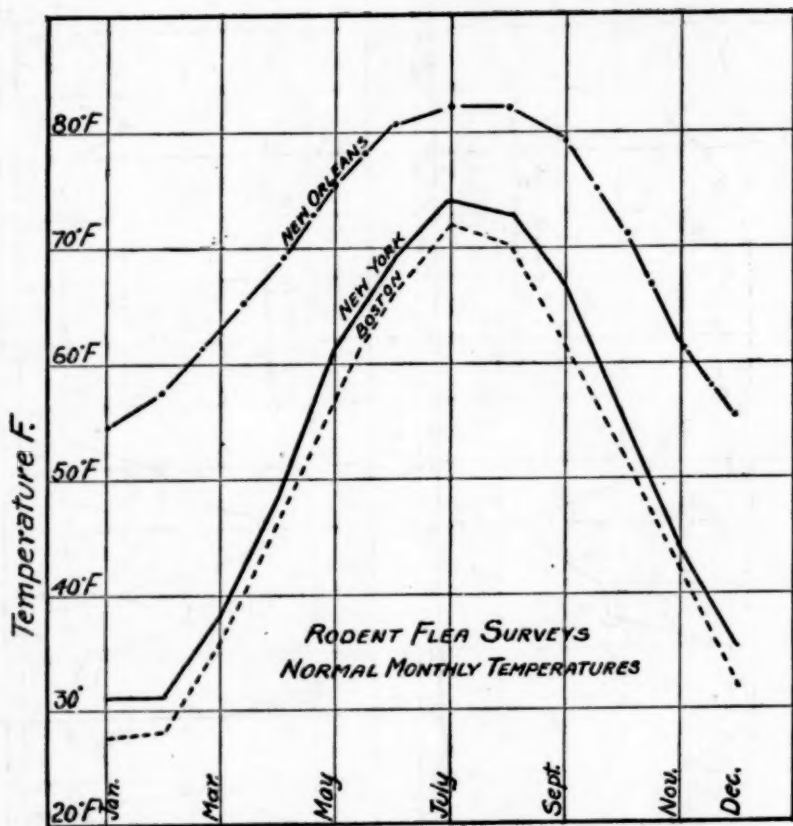


CHART 10

Temperature F.

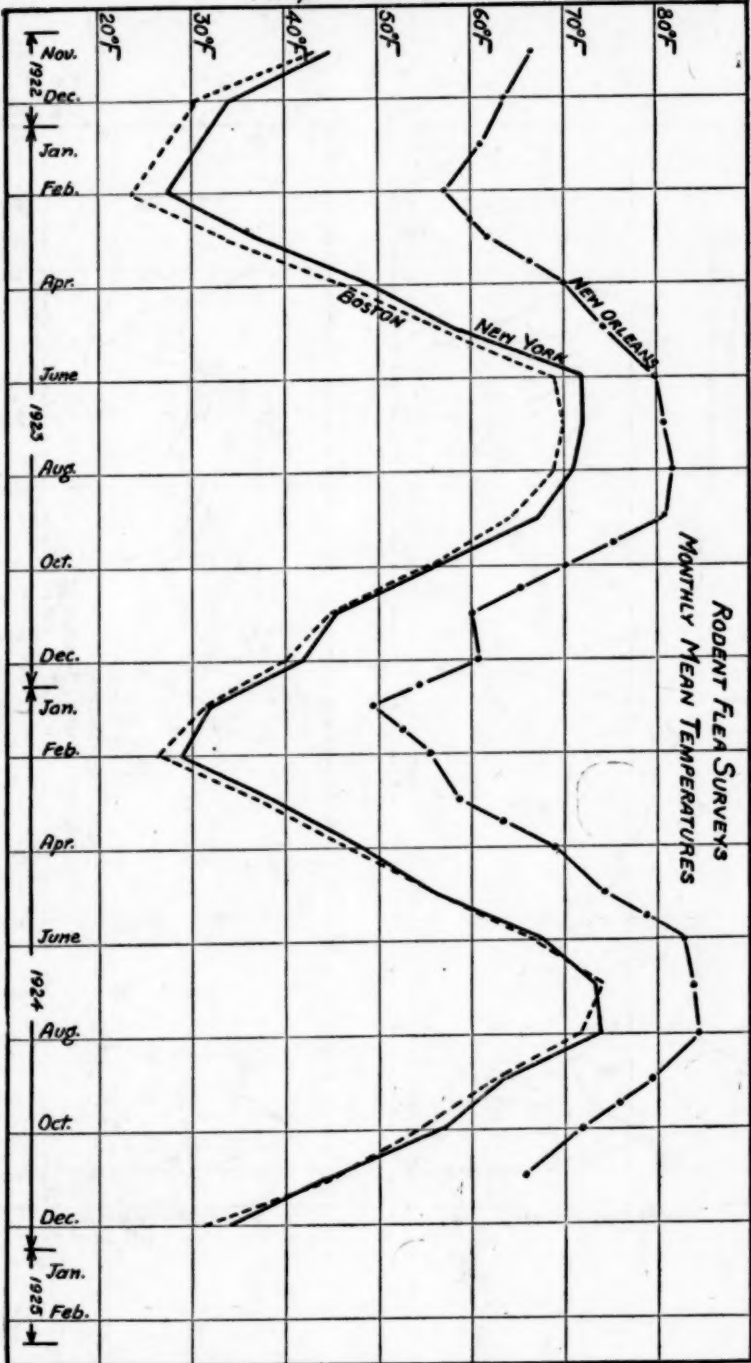


CHART II

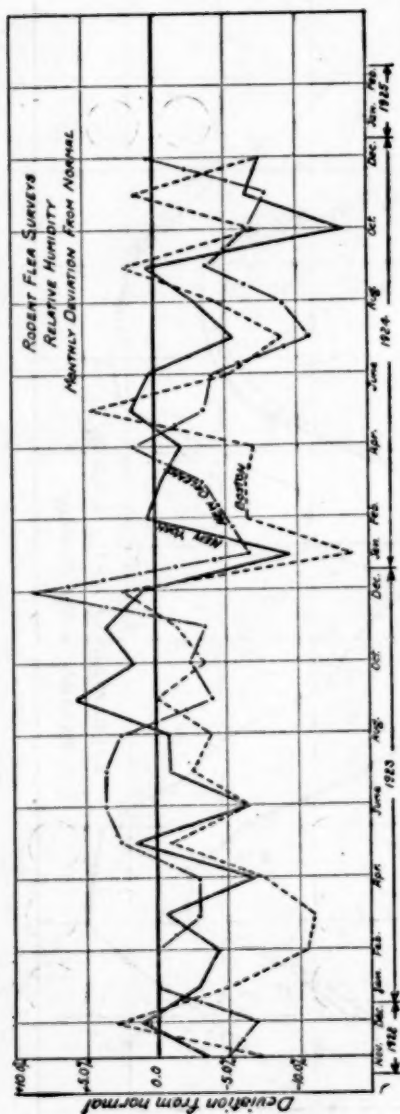


CHART 12

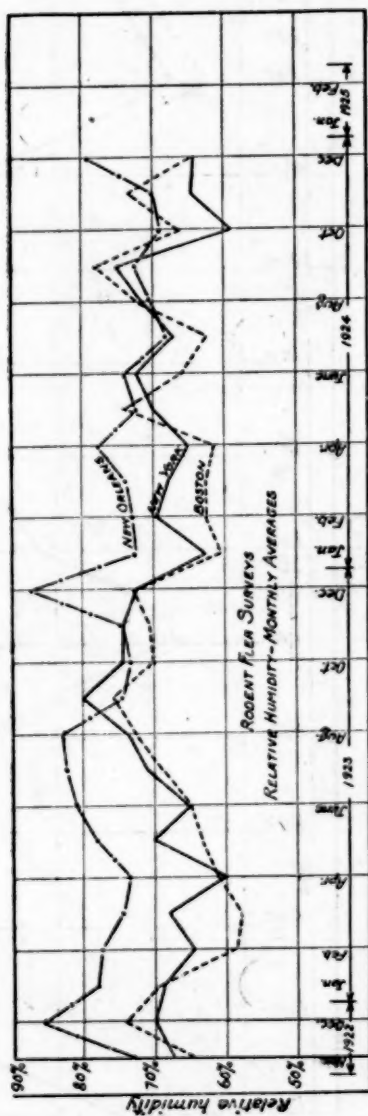


CHART 13



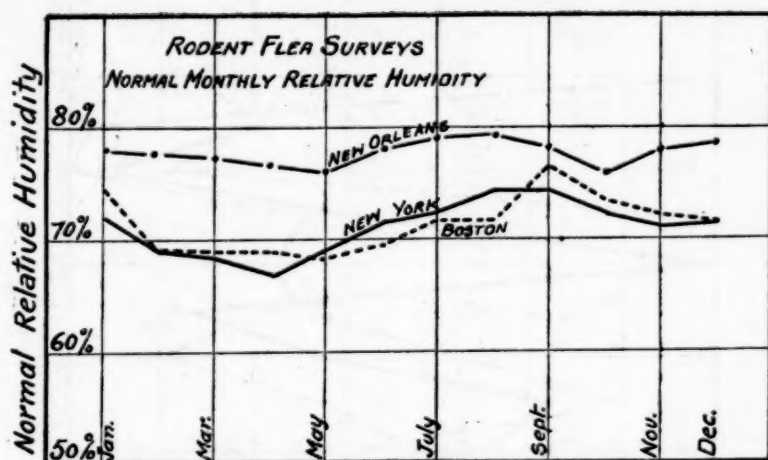


CHART 14

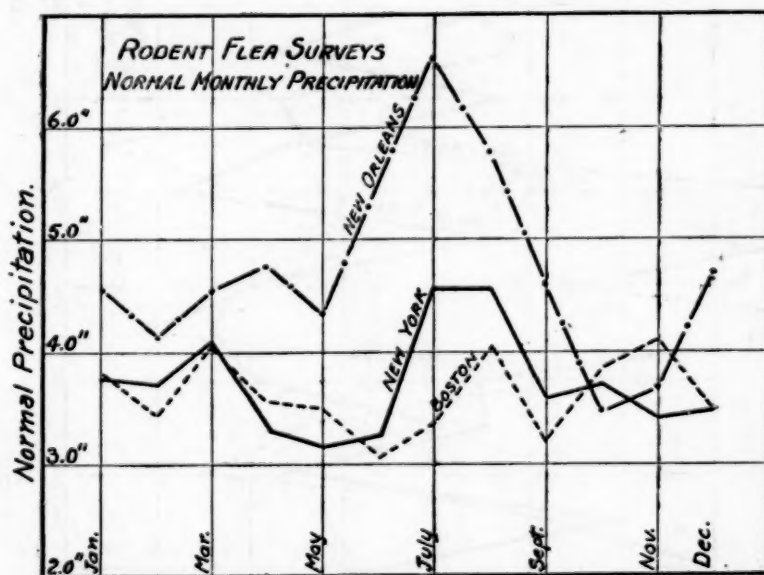


CHART 15

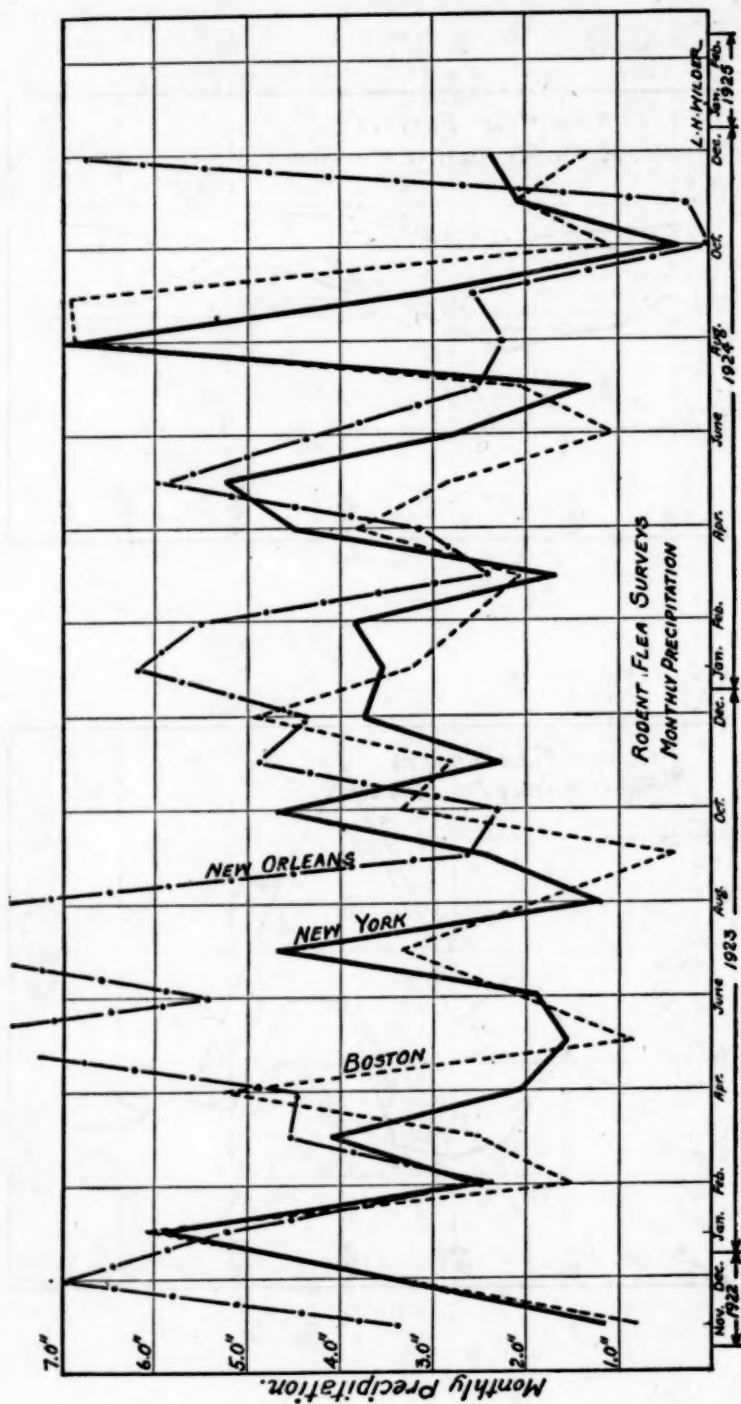


CHART 16

## CURRENT WORLD PREVALENCE OF DISEASE

REVIEW OF THE MONTHLY EPIDEMIOLOGICAL REPORT, ISSUED BY THE HEALTH SECTION OF THE LEAGUE OF NATIONS' SECRETARIAT, JULY 15, 1925<sup>1</sup>

Seasonal declines in the incidence of the more serious epidemic diseases, particularly plague, cholera, and smallpox, were reported in May and June by the countries where these diseases have been widespread. Similarly, the incidence of scarlet fever and diphtheria has shown the normal spring decline; and, as no increases in the occurrence of the warm-weather diseases were noted by the Epidemiological Report of July 15, the health situation in June, so far as epidemics are concerned, was decidedly favorable in most parts of the world.

*Plague.*—In India, where the minimum plague incidence usually occurs in July, a rapid decline was reported during May.

*Weekly plague incidence in British India during May*

Week ending—	Cases	Deaths	Week ending—	Cases	Deaths
May 2.....	3,858	3,350	May 16.....	1,162	1,012
9.....	1,952	1,672	23.....	840	667

In Java, although the plague incidence has been declining since February, the number of cases reported still exceeds the figures for previous years; 720 deaths were reported during the four weeks ended May 20, as against 947 during the previous four weeks and 382 in the corresponding period for 1924.

Plague incidence in Egypt has been lower than in previous years, and only a slight increase was reported in May and June. The total incidence in the first six months of 1925 was 78, compared with 320 in the corresponding period of 1924.

An increase in plague was reported in Kenya, where 100 cases were notified in May, compared with 56 in April and 32 in March. A decline in May and June in other infected areas of Africa, particularly in Madagascar, is noted by the Report.

*Cholera.*—The cholera incidence in India is much lower than at the corresponding season of 1924, due to "the relative quiescence of the important centers of the disease in Bengal and the Ganges Valley." The epidemic in Kashmir, referred to last month, seemed to reach its maximum in the week ending May 9, when 2,844 cases and 1,548 deaths were reported. A general decline in the cholera cases occurred in the second and third weeks of May.

<sup>1</sup> From the Statistical Office, United States Public Health Service.

*Cholera cases and deaths in India, April 19-May 25*

Week ending—	Cases	Deaths	Week ending—	Cases	Deaths
Apr. 25.....	5,187	3,197	May 16.....	4,698	3,104
May 2.....	5,521	3,163	23.....	3,815	2,411
9.....	6,079	3,585			

Other localities which reported cholera in June were Ceylon, Indo-China, Siam, and Manila.

*Yellow fever.*—Cases of yellow fever reported included 6 in Nigeria in May.

*Typhus and relapsing fever.*—The incidence of typhus fever in Eastern Europe was low during the past winter, and the recent reports show it to have diminished rapidly in the spring.

*Typhus cases and deaths reported in various countries since the beginning of 1925*

Country	Period	Cases	Deaths	Case mortality
Bulgaria.....	4 months.....	54	4	7.4
Czechoslovakia.....	5 months.....	55	2	3.6
Leningrad.....	do.....	91	2	2.2
Lithuania.....	do.....	185	9	4.9
Poland.....	15 weeks.....	2,411	173	7.2
Kingdom of the Serbs, Croats, and Slovenes.....	6 months.....	310	45	14.5
Algeria.....	5½ months.....	463	34	7.3
Union of South Africa.....	4 months.....	261	24	9.2

The following additional comment on the epidemic of relapsing fever in Central Africa, referred to last month, is given in the Report:

Reports from the Chad Colony and Nigeria indicate that the epidemic of relapsing fever (*Spirochete obermeiri*) which had raged throughout the grasslands south of the Sahara, moving from west to east, diminished rapidly during May and June. By the end of June, only Borku and Innedi, which were not reached by the epidemic until April, remained infected. Doctor Gouzien<sup>1</sup> estimates that this epidemic had caused between 50,000 and 60,000 deaths in a region which is for the most part only sparsely inhabited.

*Smallpox.*—The smallpox incidence continued to diminish in June in England and in the United States. "No important outbreaks have occurred on the Continent of Europe."

"The smallpox epidemic in India reached its height during the first half of April," states the Report, "and lower figures were reported from all provinces by the end of May. The highest number of cases during the week ending May 23 was reported from Bihar and Orissa (1,173)."

<sup>1</sup> Dr. P. Gouzien: Faits épidémiologiques, en Afrique Occidentale Française. Annales de Médecine et Pharmacie Coloniales, 1925, No. 1, pp. 66-81.

*Enteric fever and dysentery.*—The following comment with regard to enteric fever and dysentery is given in the Report:

Reports so far received show no increase in the incidence of these two diseases, with the exception of an outbreak in Sweden, where 405 cases of enteric fever occurred during the second half of June as against 46 during the preceding fortnight; 289 of these occurred in Gothenburg. Only half as many cases of this disease were reported in England in May and June as during the corresponding months of 1924. The incidence of both diseases in Central Europe was lower than during the same period of the three preceding years. A marked improvement over previous years is seen in Japan, where 1,873 cases of enteric fever and 371 of dysentery were reported for the four weeks ending May 30, as against 3,622 and 577, respectively, during May, 1924.

Reference has been made in the Public Health Reports to an increase since June in typhoid fever in the United States, particularly in the South Atlantic Division and the North and South Central Divisions. (See Public Health Reports, July 17, p. 1524, and August 14, p. 1701.)

*Epidemic diseases of the central nervous system.*—No fresh outbreaks of epidemic encephalitis, acute poliomyelitis, or cerebrospinal meningitis were noted in the reports received by the Health Section in the month prior to the publication of the July Report. A decrease was noted in the number of cases of encephalitis reported in England in June.

*Scarlet fever and diphtheria.*—A comparison of the case fatality of scarlet fever and diphtheria in a number of countries is given by the Report. Attention is called to the fact that the completeness of reporting varies considerably in different countries and that the case fatality given in the table below can not be taken as an accurate indication of the virulence of the two diseases in the countries concerned. In the same country the completeness of the reports is likely to be equal for the two diseases and, therefore, a comparison of the two will give a fairly accurate indication of the relative severity of the two diseases.

The following comparison of the relative severity of the two diseases is given by the Report:

It is significant that the case mortality of scarlet fever is higher than that of diphtheria in eastern Europe; expressed in units of the case mortality of diphtheria, it is 2.90 in Poland, 1.37 in Bulgaria, 1.36 in the Kingdom of the Serbs, Croats, and Slovenes, 1.34 in Turkey, and 1.03 in the city of Leningrad. An intermediate group is formed by Greece (0.75), Lithuania (0.67), Hungary (0.51), Rumania (0.47), and Czechoslovakia (0.43). The reported case mortality of diphtheria is from three to six times higher than that of scarlet fever in Scotland (0.33), London (0.24), Austria (0.19), the Netherlands (0.16), Canada (0.18), and New Zealand (0.22).



*Case mortality rates of diphtheria and scarlet fever in various countries since the beginning of 1925*

Country or town	Period	Diphtheria			Scarlet fever			$\frac{b^1}{a}$
		Cases	Deaths	(a) Per cent	Cases	Deaths	(b) Per cent	
England (London).....	27 weeks.....	6,189	257	4.2	5,603	57	1.0	0.24
Austria.....	24 weeks.....	1,923	60	3.1	3,141	19	.6	.78
Bulgaria.....	4 months.....	446	62	13.9	945	180	19.0	1.19
Canada.....	5 months.....	3,122	461	14.8	7,889	210	2.7	1.31
Scotland (16 cities).....	27 weeks.....	2,488	199	8.0	5,171	136	2.6	.33
France (Paris).....	6 months.....	1,378	112	8.1	1,454	62	4.3	.53
Greece.....	5½ months.....	86	14	16.3	152	19	12.3	.75
Netherlands.....	4 months.....	1,850	119	6.4	3,057	32	1.0	.16
Hungary.....	3½ months.....	1,572	150	9.5	3,617	174	4.8	.51
Lithuania.....	5 months.....	69	4	5.8	584	23	3.9	.67
New Zealand.....	22 months.....	610	14	2.3	433	2	.5	.22
Norway (cities).....	5 months.....	199	7	3.5	259	0	-----	-----
Poland.....	16 weeks.....	1,878	200	10.6	7,596	2,335	30.7	2.90
Rumania.....	4 months.....	490	94	19.2	3,969	362	9.1	.47
Kingdom of the Serbs, Croats, and Slovenes.....	6 months.....	737	116	15.7	4,163	891	21.4	1.36
Russia (Leningrad).....	17 weeks.....	278	28	10.1	2,511	262	10.4	1.03
Czechoslovakia.....	5 months.....	1,680	127	7.6	4,148	138	3.3	.43
Saar Territory.....	25 weeks.....	141	12	8.5	87	1	1.1	.13
Turkey.....	4 months.....	133	23	17.3	280	65	23.2	1.34
Uruguay.....	3 months.....	64	5	7.8	81	0	0	-----

<sup>1</sup> Case mortality of scarlet fever expressed in unit of the case mortality of diphtheria.

**Measles.**—The incidence of measles continued high in May in France, Italy, Belgium, and Hungary. A sharp increase in the disease occurred in Egypt in May and June, and more deaths occurred than at the same season of 1924, but fewer than in the epidemic of 1923. A large number of deaths from measles was reported by Mexico—956 deaths in April.

**Tuberculosis.**—An improvement in the tuberculosis mortality during the first half of 1925 as compared with last year is noted in many cities. The decline is most marked in Germany, where there were 10,181 deaths from tuberculosis (all forms) in 46 cities during the first 24 weeks of 1925, compared with 12,063 and 15,527, respectively, during the corresponding period of 1924 and 1923, and in Budapest, where the number of deaths fell from 2,043 in the first five months of 1924 to 1,383 in the corresponding period of the present year.

**Leprosy.**—The following data on leprosy are given in the Report:

*New cases of leprosy reported in various countries, by quarters, during 1924 and 1925*

Country	1924					1925
	I	II	III	IV	Total	I
Algeria.....	1	0	1	0	2	1
Western Australia.....	0	0	1	0	1	0
Dominican Republic.....	-----	-----	-----	-----	-----	1
Estonia.....	8	3	3	6	20	0
United States.....	6	4	17	9	36	8
France.....	2	2	0	2	6	0
Greece.....	0	0	2	0	2	0
Latvia.....	3	1	4	8	16	0
Iraq.....	0	0	1	0	1	10
Mexico (deaths).....	7	17	18	36	78	23
Panama Canal Zone.....	6	8	0	7	21	2
Philippine Islands—Manila.....	8	9	6	0	23	0
Serb, Croat, Slovene Kingdom.....	-----	-----	-----	-----	-----	4
Switzerland.....	0	0	0	0	1	1
Uruguay.....	3	1	2	1	7	2
Zanzibar.....	-----	-----	-----	-----	-----	1

<sup>1</sup> Imported from Bolivia.

## **DIPHTHERIA IMMUNIZATION OF SCHOOL CHILDREN IN WINDSOR, ONTARIO**

The board of education and the board of health of Windsor, Ontario, are cooperating in waging a campaign against diphtheria and plan to begin toxin-antitoxin inoculations of all susceptible school children as soon as the schools open in September. There are about 15,000 school children in Windsor and vicinity.

In order to secure the full cooperation of the school boards and the consent of the parents, the board of health addressed a letter to all school boards of the border cities reviewing the history of diphtheria in the locality from 1895 down to the present time, showing the reduction in the case fatality rate by the use of diphtheria antitoxin from between 30 and 60 to less than 6 per cent, but pointing out that while the case fatality rate had been reduced there were still a large number of cases—1,185 cases, with 54 deaths in the border cities from 1920 to 1924, inclusive. The letter also gives a brief summary of the results achieved by the use of the toxin-antitoxin mixture.

In case of inability to pay for the inoculations, they will be administered free of charge. They are to be entirely voluntary, and no child will be inoculated without the consent of the parents or guardian.

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## **ANTIVACCINATIONIST DIES OF SMALLPOX**

Health Briefs for July, issued monthly by the Tennessee Department of Public Health, takes the following item from a recent issue of the Health News, of the New York State Department of Health:

Health News of February 2 carried an item mentioning a fatal case of smallpox in a school-teacher. An interesting feature of this case has just been brought to our attention by the health officer of the municipality in which the teacher lived.

Following the teacher's death, mothers of two pupils in her class independently reported to the health officer that just before Christmas they had told the teacher that their children were to be vaccinated during the holidays. The teacher strongly advised against it on the ground that it "was a medieval custom, was harmful to the welfare of the child, and that deaths were occasionally caused by such vaccinations."

On January 12 this teacher died of smallpox.

Although she took her own advice, fortunately the mothers of her pupils did not do so.

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## **HEALTH OFFICER TRACES TYPHOID CARRIER**

The following articles are taken from the Health News (N. Y.) of August 31, 1925:

During the period July 5 to July 10, five cases of typhoid fever developed in the towns of Greenwich and Fort Edward, Washington County. Dr. Leonard

A. Hulsebosch, the local health officer, who made a very commendable epidemiological investigation of this outbreak, found that a laborer on the dairy farm from which all the patients had obtained milk, had had a fever lasting for six weeks 16 years previously. He also found that this man was employed on another farm last year and that his employer developed typhoid fever a few weeks afterwards. A specimen of feces was obtained from this employee and forwarded to the department laboratory. Typhoid bacilli were isolated from the specimen, thus definitely showing him to be a carrier.

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### DIPHTHERIA IMMUNIZATION IN A SMALL COMMUNITY

Twenty-five children in the town of Conesville, Schoharie County, have been immunized against diphtheria with toxin-antitoxin by Dr. Charles A. Shultes, health officer. The parents of preschool children were urged to secure from their family doctors this protective treatment for their children at a recent "Children's Health Consultation," held in the town under the auspices of the division of maternity, infancy, and child hygiene. This information is of special interest in view of the fact that the town has a population of less than 1,000 persons, scattered over a considerable area.

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### ABSTRACTS OF CURRENT PUBLIC HEALTH COURT DECISIONS

*Evidence held not to warrant jury in finding that contamination of well was caused by defective sewer.*—(Iowa Supreme Court.) The plaintiff alleged that, due to negligent, defective construction of a sewer in front of his premises, a well on his premises became polluted with typhoid-fever germs contained in sewage which escaped through the joints of the sewer, and that members of his family were taken ill with typhoid fever caused by drinking the contaminated well water. A jury awarded damages to the plaintiff. The supreme court, however, reversed the judgment, holding that the evidence did not warrant a finding by the jury that plaintiff's well was contaminated by sewage which escaped from the alleged defective tile joints. There was evidence showing that in the operation of the sewer the tendency would be to infiltration rather than outfiltration. It was also shown that several outside toilets and a hogpen were in closer proximity to the well than was the sewer in question. In closing the opinion the court said:

Sufficient to state that the circumstantial evidence, upon which plaintiff relies, fails to carry the burden placed upon him. The jury was not justified in inferring from a mere possibility the existence of a cause upon which plaintiff predicates his action. (*Hemminger v. City of Des Moines*, 203 N. W. 822.)

*Action against city for damages defeated by failure to present claim within time specified by charter.*—(Washington Supreme Court.) Plaintiffs, husband and wife, brought an action based on negligence against the city of Everett for damages on account of the contraction

by the wife of typhoid fever alleged to have been caused by the use of polluted water furnished by the municipality. The disease was contracted on or about July 28, 1923, and claim for damages was presented to the city on October 16, 1923. Section 145 of the city charter provided as follows:

All persons having claims for damages for personal injuries or for injuries to personal property sustained by reason of alleged negligence or any act of the city or any officer, agent, servant, or employee of the city must present such claim to the council within 30 days after such injury or damage.

The court held that the charter provision was mandatory and, claim not having been presented within the specified time, affirmed a judgment dismissing the action. (*Sheer et al. v. City of Everett*, 235 Pac. 789.)

*Pneumonia resulting from accidental injury to leg held compensable under workmen's compensation law.*—(Oregon Supreme Court.) An employee while engaged in his work received an accidental injury to his leg. Following the injury, pneumonia developed, and in a proceeding to recover compensation under the workmen's compensation law the jury found that the pneumonia was the proximate result of the leg injury. The supreme court held that the finding of the jury was supported by some evidence and affirmed a judgment in favor of the claimant. (*Robertson v. State Industrial Accident Commission*, 235 Pac. 684.)

*Ordinance requiring sewer connections when deemed necessary by city board of health construed and upheld.*—(South Carolina Supreme Court.) A property owner was ordered by the board of health of the city of Columbia, acting under authority of a city ordinance, to connect certain premises owned by her with the city sewer. The property in question faced on an alley in which there was no sewer main, but was a part of property owned by the same person, which extended entirely through a square and which faced on four streets, in all of which streets there were sewer mains. Said owner failed to comply with the order and her conviction for such failure was affirmed by the supreme court. The following points were decided in the case:

(1) The ordinance, requiring the connection "of premises on the line of the city sanitary sewers," was not restricted in its application solely to houses which faced on or immediately abutted the street upon which the sewer main was.

(2) The ordinance was not unreasonable because it required property owners to connect with sewers located at some distance, thus entailing considerable expense.

(3) It was not an abuse of the exercise of the city's discretion to place its sewer mains in the streets surrounding the particular property involved in this case and to fail to put a sewer main in the alley on which the particular property faced.

(4) The contention that the ordinance violated the State constitution, because of there being no provision in the ordinance for a hearing, by the board of health, of the protest of a property owner who had been notified to connect with the sewer, was held to be without merit. (*City of Columbia v. Shaw*, 127 S. E. 722.)

### DEATHS DURING WEEK ENDED AUGUST 22, 1925

*Summary of information received by telegraph from industrial insurance companies for week ended August 22, 1925, and corresponding week of 1924. (From the Weekly Health Index, August 25, 1925, issued by the Bureau of the Census, Department of Commerce)*

	Week ended August 22, 1925	Corresponding week, 1924
Policies in force.....	60, 810, 078	56, 783, 309
Number of death claims.....	8, 839	8, 664
Death claims per 1,000 policies in force, annual rate.....	7. 6	8. 0

*Deaths from all causes in certain large cities of the United States during the week ended August 22, 1925, infant mortality, annual death rate, and comparison with corresponding week of 1924. (From the Weekly Health Index, August 25, 1925, issued by the Bureau of the Census, Department of Commerce)*

City	Week ended Aug. 22, 1925		Annual death rate per 1,000 corresponding week, 1924	Deaths under 1 year		Infant mortality rate week ended Aug. 22, 1925 <sup>1</sup>
	Total deaths	Death rate <sup>1</sup>		Week ended Aug. 22, 1925	Corre- sponding week, 1924	
Total (66 cities).....	5, 776	10. 8	10. 3	801	771	* 67
Akron.....	32			7	2	78
Albany.....	34	14. 8	15. 0	4	6	87
Atlanta.....	67			13	2	
Baltimore.....	192	12. 6	12. 4	28	36	84
Birmingham.....	56	14. 2	12. 7	6	8	
Boston.....	172	11. 5	11. 1	24	24	64
Bridgeport.....	25			2	4	32
Buffalo.....	120	11. 3	10. 5	18	20	73
Cambridge.....	23	10. 7	11. 2	2	4	34
Camden.....	35	14. 2	11. 6	12	4	191
Chicago.....	565	9. 8	8. 8	60	74	61
Cincinnati.....	122	15. 5	13. 9	16	19	95
Cleveland.....	158	8. 8	7. 2	22	19	55
Columbus.....	78	13. 6	9. 5	14	6	128
Dallas.....	55	14. 8	12. 5	6	6	
Dayton.....	31	9. 3	12. 9	5	8	79
Denver.....	81	15. 0	14. 0	10	10	
Des Moines.....	17	5. 9	11. 9	0	1	0
Detroit.....	249			58	59	100
Duluth.....	18	8. 5	5. 3	0	2	0
El Paso.....	33	16. 4	15. 6	7	10	
Erie.....	31			3	3	86
Fall River.....	19	8. 2	12. 1	4	3	58
Flint.....	20	8. 0	7. 1	5	2	79
Fort Worth.....	28	9. 6	7. 0	4	1	
Grand Rapids.....	31	10. 6	7. 4	7	0	110
Houston.....	64	20. 2	10. 4	6	5	
Indianapolis.....	73	10. 6	12. 3	6	12	43
Jersey City.....	47	7. 8	10. 7	4	6	28
Kansas City, Kans.....	25	10. 5	11. 1	1	7	21
Kansas City, Mo.....	86	12. 2	13. 3	8	17	

<sup>1</sup> Annual rate per 1,000 population.

<sup>2</sup> Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1924. Cities left blank are not in the registration area for births.

<sup>3</sup> Data for 61 cities.

<sup>4</sup> Deaths for week ended Friday, Aug. 21, 1925.



Deaths from all causes in certain large cities of the United States during the week ended August 22, 1925, infant mortality, annual death rate, and comparison with corresponding week of 1924. (From the Weekly Health Index, August 25, 1925, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended Aug. 22, 1925		Annual death rate per 1,000 corresponding week, 1924	Deaths under 1 year		Infant mortality rate week ended Aug. 22, 1925
	Total deaths	Death rate		Week ended Aug. 22, 1925	Corresponding week, 1924	
Los Angeles.....	200			30	18	83
Louisville.....	92	18.5	12.1	15	11	131
Lowell.....	21	9.4	11.3	5	6	87
Lynn.....	17	8.5	7.0	2	0	53
Memphis.....	69	20.6	23.6	12	10	
Milwaukee.....	63	6.5	8.2	3	13	14
Minneapolis.....	84	10.3	7.7	12	4	64
Nashville.....	41	15.7	20.7	7	11	
New Bedford.....	20	7.7	6.7	0	3	0
New Haven.....	23	6.7	11.3	3	7	39
New Orleans.....	163	20.5	15.9	24	17	
New York.....	1,071	9.1	9.3	141	151	57
Bronx Borough.....	123	7.1	7.4	13	7	45
Brooklyn Borough.....	367	8.6	8.2	49	64	50
Manhattan Borough.....	459	10.6	10.8	62	62	65
Queens Borough.....	90	8.2	8.8	10	12	46
Richmond Borough.....	32	12.5	17.6	7	6	125
Newark, N. J.....	78	9.0	9.5	14	10	64
Norfolk.....	31			9	2	166
Oakland.....	48	9.9	10.8	3	4	35
Oklahoma City.....	17			4	3	
Omaha.....	45	11.1	9.8	7	7	72
Paterson.....	26	9.6	8.2	1	0	17
Philadelphia.....	417	11.0	9.1	63	51	80
Pittsburgh.....	162	13.4	10.8	30	16	100
Portland, Oreg.....	62	11.4	11.3	3	4	30
Providence.....	57	12.1	12.4	5	12	40
Richmond.....	39	10.9	10.8	6	6	72
Rochester.....	63	9.9	8.3	14	3	112
St. Louis.....	212	13.5	12.8	35	22	
St. Paul.....	44	9.3	12.2	3	7	25
Salt Lake City.....	29	11.5	12.2	1	6	16
San Antonio.....	59	15.5	16.3	16	15	
San Diego.....	32	15.7	15.7	3	0	70
San Francisco.....	119	11.1	12.0	9	6	52
Schenectady.....	20	10.2	8.3	1	2	28
Seattle.....	58			3	3	29
Somerville.....	15	7.7	3.6	2	2	54
Spokane.....	19	9.1	8.5	2	0	45
Springfield, Mass.....	28	9.6	8.8	2	9	30
Syracuse.....	28	7.6	10.8	9	7	113
Tacoma.....	19	9.5	15.2	1	2	23
Toledo.....	68	12.3	8.7	12	4	108
Trenton.....	33	13.0	15.3	7	3	115
Washington, D. C.....	106	11.1	9.4	17	13	96
Waterbury.....	12			1	2	22
Wilmington, Del.....	22	9.4	8.7	2	4	45
Worcester.....	38	10.0	12.3	5	5	58
Yonkers.....	18	8.4	10.5	2	5	44
Youngstown.....	28	9.1	10.4	8	7	99

\* Deaths for week ended Friday, Aug. 21, 1925.

## DEATHS DURING WEEK ENDED AUGUST 29, 1925

Summary of information received by telegraph from industrial insurance companies for week ended August 29, 1925, and corresponding week of 1924. (From the Weekly Health Index, September 1, 1925, issued by the Bureau of the Census, Department of Commerce)

	Week ended August 29, 1925	Corresponding week, 1924
Policies in force.....	60, 730, 631	54, 263, 831
Number of death claims.....	10, 570	8, 439
Death claims per 1,000 policies in force, annual rate.....	9. 1	8. 1

Deaths from all causes in certain large cities of the United States during the week ended August 29, 1925, infant mortality, annual death rate, and comparison with corresponding week of 1924. (From the Weekly Health Index, September 1, 1925, issued by the Bureau of the Census, Department of Commerce)

City	Week ended Aug. 29, 1925		Annual death rate per 1,000 corre- sponding week, 1924	Deaths under 1 year		Infant mortality rate week ended Aug. 29, 1925 <sup>1</sup>
	Total deaths	Death rate <sup>2</sup>		Week ended Aug. 29, 1925	Corre- sponding week, 1924	
Total (66 cities).....	5, 601	10.5	10.8	847	843	73
Albany <sup>4</sup> .....	30	13.1	12.3	0	6	0
Atlanta.....	69			7	9	
Baltimore <sup>4</sup> .....	163	10.7	11.6	22	26	66
Birmingham.....	58	14.7	12.7	6	4	
Boston.....	172	11.5	13.4	23	40	61
Bridgeport.....	27			2	1	32
Buffalo.....	110	10.4	13.0	24	26	97
Cambridge.....	18	8.3	8.9	3	3	52
Camden.....	20	8.1	7.8	4	4	64
Chicago <sup>4</sup> .....	534	9.3	9.4	81	73	72
Cincinnati.....	110	14.0	14.6	14	18	83
Cleveland.....	172	9.6	9.5	36	23	90
Columbus.....	64	11.9	15.2	12	7	110
Dallas.....	39	10.5	10.8	7	6	
Dayton.....	32	9.6	13.6	2	7	31
Denver.....	86	16.0	15.1	16	12	
Des Moines.....	23	8.0	10.8	3	3	51
Detroit.....	248			66	46	113
Duluth.....	19	9.0	12.0	3	3	65
El Paso.....	24	11.9	11.9	5	10	
Erie.....	12			1	0	19
Fall River <sup>4</sup> .....	24	10.3	10.3	5	4	72
Flint.....	18	7.2	5.9	5	2	79
Fort Worth.....	18	6.2	8.4	1	6	
Grand Rapids.....	33	11.3	7.4	10	1	157
Houston.....	32	16.4	16.0	4	7	
Indianapolis.....	83	12.1	15.0	10	18	71
Jersey City.....	63	10.4	7.2	8	7	57
Kansas City, Kans.....	27	11.4	11.1	2	8	42
Kansas City, Mo.....	86	11.4	11.9	10	2	
Los Angeles.....	189			22	18	61
Louisville.....	62	12.5	12.3	8	10	70
Lowell.....	22	9.9	11.7	6	10	101
Lynn.....	12	6.0	10.1	3	3	80
Memphis.....	56	16.7	19.4	9	10	
Milwaukee.....	85	8.8	7.4	7	9	33
Minneapolis.....	79	9.7	8.7	9	5	48
Nashville <sup>4</sup> .....	39	14.9	20.3	3	9	
New Bedford.....	24	9.3	8.7	5	7	83
New Haven.....	39	11.4	7.4	8	3	104
New Orleans.....	132	16.6	16.6	21	19	

<sup>1</sup> Annual rate per 1,000 population.

<sup>2</sup> Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1924. Cities left blank are not in the registration area for births.

<sup>3</sup> Data for 60 cities.

<sup>4</sup> Deaths for week ended Friday, Aug. 28, 1925.

Deaths from all causes in certain large cities of the United States during the week ended August 29, 1925, infant mortality, annual death rate, and comparison with corresponding week of 1924. (From the Weekly Health Index, September 1, 1925, issued by the Bureau of the Census, Department of Commerce)—Continued

City	Week ended Aug. 29, 1925		Annual death rate per 1,000 corresponding week, 1924	Deaths under 1 year		Infant mortality rate week ended Aug. 29, 1925
	Total deaths	Death rate		Week ended Aug. 29, 1925	Corresponding week, 1924	
New York	1,088	9.3	9.6	154	171	62
Bronx Borough	115	6.6	6.8	8	13	28
Brooklyn Borough	364	8.5	9.1	57	68	59
Manhattan Borough	481	11.1	11.0	73	70	76
Queens Borough	99	9.0	7.9	15	12	70
Richmond Borough	29	11.3	18.8	1	8	18
Newark, N. J.	93	10.7	8.1	15	11	68
Norfolk	26			3	4	55
Oakland	44	9.0	11.0	6	6	69
Oklahoma City	24			0	3	
Omaha	53	13.1	13.3	5	5	51
Paterson	33	12.1	14.8	2	6	34
Philadelphia	404	10.6	10.9	77	60	97
Pittsburgh	161	13.3	12.2	33	29	110
Portland, Oreg.	43	7.9	7.9	3	3	30
Providence	45	9.6	10.3	8	5	64
Richmond	41	11.5	9.1	7	0	84
Rochester	72	11.3	10.6	12	14	96
St. Louis	168	10.7	12.1	27	30	
St. Paul	58	12.3	12.2	3	5	25
Salt Lake City	22	8.8	13.4	0	4	0
San Antonio	47	12.4	15.0	7	2	
San Diego	21	10.3	15.1	1	1	23
San Francisco	118	11.0	11.7	11	16	64
Schenectady	22	11.2	10.9	8	4	225
Seattle	86			5	1	48
Somerville	16	8.2	6.7	2	2	54
Spokane	22	10.5	14.5	1	2	22
Springfield, Mass.	25	8.5	9.8	2	4	30
Syracuse	36	9.8	10.5	7	2	88
Tacoma	19	9.5	8.6	1	0	23
Toledo	58	10.5	7.6	8	8	72
Trenton	38	15.0	16.1	8	8	131
Washington, D. C.	117	12.3	11.5	22	16	124
Waterbury	15			4	4	86
Wilmington, Del.	20	8.5	8.7	5	2	113
Worcester	46	12.1	13.9	7	7	81
Yonkers	25	11.7	10.0	5	4	109
Youngstown	24	7.8	9.4	5	5	62

\* Deaths for the week ended Friday, Aug. 28, 1925.

# PREVALENCE OF DISEASE

*No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring*

## UNITED STATES

### CURRENT WEEKLY STATE REPORTS

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers

#### Reports for Week Ended September 5, 1925

ALABAMA		ARKANSAS—continued	
	Cases		Cases
Cerebrospinal meningitis.....	1	Typhoid fever.....	59
Diphtheria.....	33	Whooping cough.....	15
Dengue.....	4		
Influenza.....	3	CALIFORNIA	
Malaria.....	104	Cerebrospinal meningitis:	
Measles.....	1	Dinuba.....	1
Mumps.....	9	Los Angeles.....	1
Pellagra.....	6	Diphtheria.....	51
Pneumonia.....	14	Influenza.....	2
Polio-myelitis.....	3	Lethargic encephalitis—San Francisco.....	1
Scarlet fever.....	21	Measles.....	10
Smallpox.....	2	Polio-myelitis:	
Tetanus.....	4	Bakersfield.....	1
Trachoma.....	1	Exeter.....	1
Tuberculosis.....	53	Fresno County.....	1
Typhoid fever.....	73	Gridley.....	1
Whooping cough.....	25	Los Angeles.....	8
		Oakland.....	1
ARIZONA		Palo Alto.....	2
Scarlet fever.....	1	Pasadena.....	1
Tuberculosis.....	4	Redondo Beach.....	1
Typhoid fever.....	3	San Diego.....	1
		San Francisco.....	3
ARKANSAS		Santa Ana.....	1
Chicken pox.....	11	Stockton.....	2
Diphtheria.....	2	Scarlet fever.....	27
Hookworm disease.....	2	Smallpox:	
Influenza.....	11	Los Angeles.....	7
Malaria.....	219	Scattering.....	10
Measles.....	1	Typhoid fever:	
Mumps.....	8	Los Angeles.....	5
Ophthalmia neonatorum.....	2	Scattering.....	17
Paratyphoid fever.....	1		
Pellagra.....	15	COLORADO	
Scarlet fever.....	4	(Exclusive of Denver)	
Smallpox.....	2	Chicken pox.....	1
Trachoma.....	1	Diphtheria.....	22
Tuberculosis.....	7	Influenza.....	2

(1946)

## COLORADO—continued

	Cases
Measles.....	1
Mumps.....	4
Pneumonia.....	2
Poliomyelitis.....	1
Scarlet fever.....	14
Tuberculosis.....	67
Typhoid fever.....	34
Whooping cough.....	29

## CONNECTICUT

Chicken pox.....	3
Diphtheria.....	20
Dysentery.....	1
German measles.....	1
Measles.....	4
Mumps.....	2
Pneumonia (broncho).....	9
Pneumonia (lobar).....	9
Poliomyelitis.....	2
Scarlet fever.....	7
Tetanus.....	1
Tuberculosis.....	31
Typhoid fever.....	5
Whooping cough.....	43

## DELAWARE

Tuberculosis.....	1
Typhoid fever.....	9
Whooping cough.....	3

## GEORGIA

Actinomycosis.....	1
Chicken pox.....	2
Conjunctivitis.....	5
Diphtheria.....	31
Dysentery.....	8
Hookworm disease.....	2
Influenza.....	11
Malaria.....	63
Measles.....	2
Mumps.....	6
Pellagra.....	4
Pneumonia.....	10
Poliomyelitis.....	1
Scarlet fever.....	6
Septic sore throat.....	2
Smallpox.....	2
Trachoma.....	1
Tuberculosis.....	17
Typhoid fever.....	20
Typhus fever.....	5
Whooping cough.....	2

## ILLINOIS

Diphtheria:	
Cook County.....	31
Scattering.....	16
Influenza.....	4
Lethargic encephalitis:	
Cook County.....	1
McLean County.....	1
Measles.....	32
Pneumonia.....	84
Poliomyelitis:	
Cook County.....	6
Fulton County.....	4
Henry County.....	3

## ILLINOIS—continued

	Cases
Poliomyelitis—Continued.	
Jefferson County.....	1
Kankakee County.....	1
Knox County.....	2
Livingston County.....	1
Macoupin County.....	1
Peoria County.....	2
Rock Island County.....	2
Schuyler County.....	1
Stark County.....	2
Williamson County.....	1

Scarlet fever:	
Cook County.....	28
Lawrence County.....	6
St. Clair County.....	8
Scattering.....	43

Smallpox:	
Cook County.....	3
Tazewell County.....	3
Scattering.....	2
Tuberculosis.....	219

Typhoid fever:	
Cook County.....	10
Jackson County.....	5
Montgomery County.....	6
Saline County.....	6
Union County.....	5
Scattering.....	41
Whooping cough.....	136

## INDIANA

Cerebrospinal meningitis.....	1
Chicken pox.....	4
Diphtheria.....	19
Influenza.....	43
Measles.....	2
Pneumonia.....	4
Poliomyelitis.....	2
Scarlet fever.....	17
Smallpox.....	2
Tuberculosis.....	46
Typhoid fever.....	46
Whooping cough.....	25

## IOWA

Cerebrospinal meningitis—Linden.....	1
Chicken pox.....	1
Diphtheria.....	14
Measles.....	1
Mumps.....	10
Poliomyelitis:	
Adel.....	1
Alden.....	1
Cedar Rapids.....	1
Corwith.....	2
Fairfield.....	1
Gladbrook.....	1
Oskaloosa.....	1
Scarlet fever.....	7
Smallpox.....	9
Typhoid fever.....	14
Whooping cough.....	1

## KANSAS

Cerebrospinal meningitis—Atchison.....	1
Chicken pox.....	3

## KANSAS—continued.

	Cases
Diphtheria.....	8
Dysentery.....	3
Influenza.....	3
Measles.....	3
Mumps.....	7
Ophthalmia neonatorum.....	1
Pneumonia.....	8
Poliomyelitis:	
Bendena.....	1
Council Grove.....	1
Kensington.....	1
Mildred.....	1
Minneapolis.....	1
Newton.....	1
Ottawa.....	2
Valley Falls.....	1
Wichita.....	2
Scarlet fever.....	24
Tuberculosis.....	62
Typhoid fever.....	42
Whooping cough.....	66

## LOUISIANA

Diphtheria.....	15
Influenza.....	6
Malaria.....	23
Pneumonia.....	27
Poliomyelitis.....	1
Scarlet fever.....	5
Smallpox.....	2
Tuberculosis.....	33
Typhoid fever.....	54
Whooping cough.....	14

## MAINE

Chicken pox.....	1
Diphtheria.....	1
Measles.....	1
Mumps.....	7
Pneumonia.....	1
Poliomyelitis.....	1
Scarlet fever.....	4
Tuberculosis.....	6
Typhoid fever.....	3
Whooping cough.....	5

MARYLAND<sup>1</sup>

Cerebrospinal meningitis.....	1
Diphtheria.....	27
Dysentery.....	11
German measles.....	1
Influenza.....	13
Lethargic encephalitis.....	1
Malaria.....	10
Measles.....	13
Mumps.....	4
Ophthalmia neonatorum.....	1
Paratyphoid fever.....	8
Pneumonia (broncho).....	11
Pneumonia (lobar).....	5
Poliomyelitis.....	3
Scarlet fever.....	12
Tetanus.....	1
Tuberculosis.....	42
Typhoid fever.....	60
Vincent's angina.....	1
Whooping cough.....	66

## MASSACHUSETTS

	Cases
Cerebrospinal meningitis.....	2
Chicken pox.....	5
Conjunctivitis (suppurative).....	13
Diphtheria.....	39
German measles.....	6
Influenza.....	2
Lethargic encephalitis.....	4
Measles.....	36
Mumps.....	4
Ophthalmia neonatorum.....	24
Pneumonia (lobar).....	27
Poliomyelitis.....	10
Scarlet fever.....	39
Septic sore throat.....	2
Tetanus.....	2
Tuberculosis (all forms).....	119
Typhoid fever.....	19
Whooping cough.....	131

## MICHIGAN

Diphtheria.....	35
Measles.....	13
Pneumonia.....	45
Scarlet fever.....	55
Smallpox.....	2
Tuberculosis.....	260
Typhoid fever.....	36
Whooping cough.....	112

## MINNESOTA

Cerebrospinal meningitis.....	1
Chicken pox.....	6
Diphtheria.....	39
Influenza.....	3
Measles.....	1
Poliomyelitis.....	87
Scarlet fever.....	56
Tuberculosis.....	49
Typhoid fever.....	6
Whooping cough.....	16

## MISSISSIPPI

Diphtheria.....	21
Scarlet fever.....	12
Smallpox.....	5
Typhoid fever.....	74

## MISSOURI

(Exclusive of Kansas City)

Chicken pox.....	4
Diphtheria.....	27
Malaria.....	1
Measles.....	1
Mumps.....	9
Ophthalmia neonatorum.....	1
Pneumonia.....	3
Poliomyelitis.....	3
Scarlet fever.....	47
Smallpox.....	4
Tetanus.....	1
Trachoma.....	16
Tuberculosis.....	41
Typhoid fever.....	62
Whooping cough.....	46

## MONTANA

Chicken pox.....	1
Diphtheria.....	6

<sup>1</sup> Week ended Friday.



MONTANA—continued	
	Cases
Measles.....	1
Mumps.....	12
Poliomyelitis:	
Dagmar.....	1
Missoula.....	1
Scarlet fever.....	11
Smallpox.....	1
Tuberculosis.....	3
Typhoid fever.....	12
Whooping cough.....	8

NEBRASKA	
Cerebrospinal meningitis.....	1
Chicken pox.....	4
Diphtheria.....	2
Measles.....	2
Mumps.....	2
Poliomyelitis.....	7
Scarlet fever.....	2
Tuberculosis.....	1
Typhoid fever.....	6
Whooping cough.....	10

NEW JERSEY	
Cerebrospinal meningitis.....	3
Chicken pox.....	9
Diphtheria.....	41
Influenza.....	3
Measles.....	21
Pneumonia.....	22
Poliomyelitis.....	9
Scarlet fever.....	23
Typhoid fever.....	31
Whooping cough.....	64

NEW MEXICO	
Conjunctivitis.....	1
Diphtheria <sup>1</sup> .....	3
Dysentery.....	2
Mumps.....	1
Paratyphoid fever.....	1
Poliomyelitis.....	1
Tuberculosis.....	9
Typhoid fever.....	20
Whooping cough.....	15

NEW YORK	
(Exclusive of New York City)	
Diphtheria.....	42
Influenza.....	3
Lethargic encephalitis.....	1
Measles.....	31
Pneumonia.....	73
Poliomyelitis.....	23
Scarlet fever.....	47
Typhoid fever.....	38
Whooping cough.....	120

NORTH CAROLINA	
Chicken pox.....	2
Diphtheria.....	91
Measles.....	3
Poliomyelitis.....	3
Scarlet fever.....	25

NORTH CAROLINA—continued	
Septic sore throat.....	1
Smallpox.....	11
Typhoid fever.....	37
Whooping cough.....	49

OKLAHOMA	
(Exclusive of Tulsa and Oklahoma City)	
Diphtheria.....	1
Influenza.....	5
Malaria.....	53
Measles.....	1
Pellagra.....	2
Pneumonia.....	3
Poliomyelitis:	
Cherokee.....	1
Choctaw.....	1
Scarlet fever.....	1
Typhoid fever.....	26
Whooping cough.....	4

OREGON	
Cerebrospinal meningitis.....	1
Chicken pox.....	3
Diphtheria.....	11
Measles.....	2
Mumps.....	2
Pneumonia.....	4
Poliomyelitis.....	1
Scarlet fever.....	4
Smallpox.....	2
Tuberculosis.....	8
Typhoid fever.....	4
Whooping cough.....	7

SOUTH CAROLINA	
Dengue.....	1
Diphtheria.....	50
Influenza.....	34
Malaria.....	299
Poliomyelitis.....	2
Scarlet fever.....	5
Smallpox.....	1
Tuberculosis.....	36
Typhoid fever.....	56
Whooping cough.....	35

SOUTH DAKOTA	
Chicken pox.....	4
Diphtheria.....	2
Influenza.....	4
Poliomyelitis.....	1
Scarlet fever.....	18
Trachoma.....	1
Tuberculosis.....	4
Typhoid fever.....	9
Whooping cough.....	1

TEXAS	
Chicken pox.....	1
Diphtheria.....	8
Dysentery.....	2
Influenza.....	8
Malaria.....	12
Measles.....	2

<sup>1</sup> The Public Health Service is advised that report of 13 cases of diphtheria in Bernalillo County, N. Mex. week ended Aug. 13, 1923, was incorrect and should have been report of 2 cases.

<sup>2</sup> Deaths.

## TEXAS—continued

TEXAS—continued		Cases
Mumps.....	2	2
Paratyphoid fever.....	1	1
Pellagra.....	6	6
Pneumonia.....	2	2
Poliomyelitis.....	3	3
Scarlet fever.....	8	8
Smallpox.....	4	4
Trachoma.....	3	3
Tuberculosis.....	13	13
Typhoid fever.....	37	37
Typhus fever.....	6	6
Whooping cough.....	91	91

## VERMONT

VERMONT	
Diphtheria.....	2
Measles.....	1
Mumps.....	12
Typhoid fever.....	1
Whooping cough.....	11

## VIRGINIA

Typhus fever—Henrico County.....	1
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## WASHINGTON

Cerebrospinal meningitis—Tacoma	1
Chicken pox	7
Diphtheria	8
Measles	1
Mumps	9
Pneumonia	1
Poliomyelitis:	
King County	1
Kitsap County	1
Pierce County	1
Seattle	2
Skagit County	4
Snohomish County	1
Tacoma	1
Scarlet fever	8
Smallpox	11
Tuberculosis	42
Typhoid fever	11
Whooping cough	21

## WEST VIRGINIA

WEST VIRGINIA		Cases
Diphtheria.....	.....	4
Scarlet fever.....	.....	7
Smallpox.....	.....	2
Typhoid fever.....	.....	21

## WISCONSIN

**Milwaukee:**

Chicken pox	3
Diphtheria	3
Mumps	3
Pneumonia	11
Scarlet fever	4
Tuberculosis	10
Typhoid fever	1
Whooping cough	54

**Scattering:**

Cerebrospinal meningitis	2
Chicken pox	22
Diphtheria	28
German measles	33
Influenza	4
Lethargic encephalitis	2
Measles	65
Mumps	17
Pneumonia	2
Poliomyelitis	20
Scarlet fever	27
Smallpox	1
Tuberculosis	28
Typhoid fever	5
Whooping cough	128

## WYOMING

Chicken pox.....	1
Diphtheria.....	5
Influenza.....	5
Poliomyelitis-Goshen.....	1
Scarlet fever.....	7
Tuberculosis.....	2
Typhoid fever.....	2

### Reports for Week Ended August 29, 1925

## DISTRICT OF COLUMBIA

DISTRICT OF COLUMBIA	Cases
Measles.....	2
Pneumonia.....	7
Polioomyelitis.....	2
Scarlet fever.....	7
Tuberculosis.....	27
Typhoid fever.....	3
Whooping cough.....	16

## NEBRASKA

Diphtheria	1
Measles	1
Mumps	3
Poliomyelitis	6
Scarlet fever	8
Smallpox	2
Typhoid fever	2
Whooping cough	5

## NEW YORK

(Exclusive of New York City)

Cerebrospinal meningitis.....	1
Diphtheria.....	37
Influenza.....	1
Measles.....	54
Pneumonia.....	73

## NEW YORK—continued

NEW YORK—continued	Cases
Poliomyelitis.....	30
Scarlet fever.....	31
Typhoid fever.....	35
Whooping cough.....	135

## NORTH DAKOTA

Diphtheria.....	7
Mumps.....	2
Pneumonia.....	1
Scarlet fever.....	15
Tuberculosis.....	5
Typhoid fever.....	1
Whooping cough.....	26

## SOUTH CAROLINA

SOUTH CAROLINA	
Dengue .....	4
Diphtheria .....	41
Influenza .....	31
Malaria .....	365
Polioomyelitis .....	7
Scarlet fever .....	5
Smallpox .....	1
Tuberculosis .....	46
Typhoid fever .....	73
Whooping cough .....	24

# PLAGUE-ERADICATIVE MEASURES IN THE UNITED STATES

The following items were taken from the reports of plague-eradicate measures from the cities named:

## *Los Angeles, Calif.*

Week ended Aug. 22, 1925:

Number of rats trapped.....	2, 305
Number of rats found to be plague infected.....	2
Number of squirrels examined.....	540
Number of squirrels found to be plague infected.....	0
Number of mice trapped.....	2, 318
Number of mice found to be plague infected.....	0

Date of discovery of last plague-infected rodent, Aug. 22, 1925.

Date of last human case, Jan. 15, 1925.

## *Oakland, Calif.*

(Including other East Bay communities)

Week ended Aug. 22, 1925:

Number of rats trapped.....	1, 191
Number of rats found to be plague infected.....	0

Totals:

Number of rats trapped Jan. 1 to Aug. 22, 1925.....	65, 444
Number of rats found to be plague infected.....	21
Number of squirrels examined May 1 to Aug. 1, 1925.....	7, 277
Number of squirrels found to be plague infected.....	0

Date of discovery of last plague-infected rat, Mar. 4, 1925.

Date of last human case, Sept. 10, 1919.

## *New Orleans, La.*

Week ended Aug. 22, 1925:

Number of vessels inspected.....	16
Number of inspections made.....	34
Number of vessels fumigated with cyanide gas.....	11
Number of rodents examined for plague.....	2, 799
Number of rodents found to be plague infected.....	0

Totals, Dec. 5, 1924, to Aug. 22, 1925:

Number of rodents examined for plague.....	160, 144
Number of rodents found to be plague infected.....	12

Date of discovery of last plague-infected rat, Jan. 17, 1925.

Date of last human case occurring in New Orleans, Aug. 20, 1920.

## POLIOMYELITIS IN THE UNITED STATES

*Cases of poliomyelitis reported by State health officers for the six weeks ended August 29, 1925, compared with reports for the corresponding period of 1924*

State	1924	1925	State	1924	1925
Alabama.....	3	23	Missouri.....	1	161
Arizona.....	1	14	Montana.....	137	18
Arkansas.....	1	0	Nebraska.....	0	21
California.....	10	270	New Jersey.....	14	67
Colorado.....	1	12	New York.....	403	274
Connecticut.....	45	21	North Carolina.....	6	33
Delaware.....	0	10	North Dakota.....	2	141
District of Columbia.....	1	6	Oregon.....	0	2
Florida.....	0	23	South Dakota.....	5	5
Georgia.....	0	5	Texas.....	3	5
Illinois.....	44	52	Vermont.....	1	9
Indiana.....	20	9	Washington.....	21	26
Kansas.....	4	38	West Virginia.....	1	2
Louisiana.....	1	7	Wisconsin.....	3	78
Maine.....	35	5	Wyoming.....	0	4
Maryland.....	61	8			
Massachusetts.....	45	33	Total.....	785	1,498
Minnesota.....	16	326			

<sup>1</sup> Incomplete.

*Cases of poliomyelitis reported by the health officers of 32 States July 19 to August 29, 1925, and July 20 to August 30, 1924, by weeks*

Week ended—	1924	Week ended—	1925
July 26.....	66	July 25.....	172
Aug. 2.....	75	Aug. 1.....	218
Aug. 9.....	99	Aug. 8.....	275
Aug. 16 <sup>1</sup> .....	149	Aug. 15.....	279
Aug. 23.....	166	Aug. 22.....	278
Aug. 30.....	230	Aug. 29 <sup>1</sup> .....	276
Total.....	785	Total.....	1,498

<sup>1</sup> Incomplete.

## GENERAL CURRENT SUMMARY AND WEEKLY REPORTS FROM CITIES

*Diphtheria.*—For the week ended August 22, 1925, 34 States reported 837 cases of diphtheria. For the week ended August 23, 1924, the same States reported 961 cases of this disease. One hundred and two cities, situated in all parts of the country and having an aggregate population of more than 28,700,000, reported 382 cases of diphtheria for the week ended August 22, 1925. Last year for the corresponding week they reported 495 cases. The estimated expectancy for these cities was 564 cases. The estimated expectancy is based on the experience of the last nine years, excluding epidemics.

*Measles.*—Thirty-one States reported 395 cases of measles for the week ended August 22, 1925, and 430 cases of this disease for the week ended August 23, 1924. One hundred and two cities reported 172 cases of measles for the week this year, and 137 cases last year.

*Poliomyelitis.*—The health officers of 36 States reported 289 cases of poliomyelitis for the week ended August 22, 1925. The same States reported 168 cases for the week ended August 23, 1924.

*Scarlet fever.*—Scarlet fever was reported for the week as follows: Thirty-four States—this year, 672 cases; last year, 732 cases; 102 cities—this year, 291, last year, 291 cases; estimated expectancy, 223 cases.

*Smallpox.*—For the week ended August 22, 1925, 34 States reported 125 cases of smallpox. Last year for the corresponding week, they reported 191 cases. One hundred and two cities reported smallpox for the week as follows: 1925, 30 cases; 1924, 71 cases; estimated expectancy, 20 cases. One death from smallpox was reported by these cities for the week this year—at Los Angeles, Calif.

*Typhoid fever.*—One thousand and ninety cases of typhoid fever were reported for the week ended August 22, 1925, by 34 States. For the corresponding week of 1924 the same States reported 765 cases. One hundred and two cities reported 314 cases of typhoid fever for the week this year, and 246 cases for the corresponding week last year. The estimated expectancy for these cities was 236 cases.

*Influenza and pneumonia.*—Deaths from influenza and pneumonia (combined) were reported for the week by 102 cities as follows: 1925, 309 deaths; 1924, 258 deaths.

*City reports for week ended August 22, 1925*

The "estimated expectancy" given for diphtheria, poliomyelitis, scarlet fever, smallpox, and typhoid fever is the result of an attempt to ascertain from previous occurrence how many cases of the disease under consideration may be expected to occur during a certain week in the absence of epidemics. It is based on reports to the Public Health Service during the past nine years. It is in most instances the median number of cases reported in the corresponding week of the preceding years. When the reports include several epidemics or when for other reasons the median is unsatisfactory, the epidemic periods are excluded and the estimated expectancy is the mean number of cases reported for the week during nonepidemic years.

If reports have not been received for the full nine years, data are used for as many years as possible, but no year earlier than 1915 is included. In obtaining the estimated expectancy, the figures are smoothed when necessary to avoid abrupt deviations from the usual trend. For some of the diseases given in the table the available data were not sufficient to make it practicable to compute the estimated expectancy.

Division, State, and city	Population July 1, 1923, estimated	Chick- en pox, cases re- ported	Diphtheria		Influenza		Meas- les, cases re- ported	Mumps, cases re- ported	Pneu- monia, deaths re- ported
			Cases, esti- mated expec- tancy	Cases re- ported	Cases re- ported	Deaths re- ported			
NEW ENGLAND									
Maine:									
Portland.....	73, 129	0	1	0	0	0	2	0	1
New Hampshire:									
Concord.....	22, 408	0	0	0	0	0	0	0	0
Manchester.....	81, 383	1	1	1	0	0	0	0	0
Nashua.....	29, 234	0	1	0	0	0	0	0	0
Vermont:									
Barre.....	10, 008	0	0	0	0	0	0	0	0
Burlington.....	23, 613	0	1	0	0	0	1	0	0
Massachusetts:									
Boston.....	770, 400	4	33	10	0	0	11	1	7
Fall River.....	120, 912	1	2	1	0	0	8	0	0
Springfield.....	144, 227	0	2	1	0	0	0	0	0
Worcester.....	191, 927	0	2	2	0	0	7	1	2
Rhode Island:									
Pawtucket.....	68, 799	0	0	1	0	0	0	0	0
Providence.....	242, 378	0	6	2	0	0	9	0	1



## City reports for week ended August 22, 1925—Continued

Division, State, and city	Population July 1, 1923, estimated	Chick- en pox, cases re-ported	Diphtheria		Influenza		Meas- les, cases re-ported	Mumps, cases re-ported	Pneu- moia, deaths re-ported
			Cases, esti- mated expectancy	Cases re-ported	Cases re-ported	Deaths re-ported			
NEW ENGLAND—CON.									
Connecticut:									
Bridgeport.....	1 143,555	0	3	3	0	0	1	0	0
Hartford.....	1 138,036	0	3	1	0	0	1	0	3
New Haven.....	172,967	1	2	0	0	0	0	0	2
MIDDLE ATLANTIC									
New York:									
Buffalo.....	536,718	0	11	1	0	0	0	0	4
New York.....	5,927,625	22	103	95	1	1	28	6	76
Rochester.....	317,867	2	4	2	0	0	6	0	1
Syracuse.....	184,511	0	4	0	0	0	0	0	2
New Jersey:									
Camden.....	124,157	0	1	1	1	1	2	0	0
Newark.....	438,690	2	7	3	1	0	8	1	3
Trenton.....	127,390	0	3	0	0	0	1	0	1
Pennsylvania:									
Philadelphia.....	1,922,788	9	31	39	0	1	12	1	23
Pittsburgh.....	613,442	3	16	3	0	0	11	1	17
Reading.....	110,917	0	2	0	0	0	7	1	1
EAST NORTH CENTRAL									
Ohio:									
Cincinnati.....	406,312	2	5	1	0	1	0	0	3
Cleveland.....	888,519	9	20	11	1	0	5	1	8
Columbus.....	261,082	0	2	0	0	1	0	0	2
Toledo.....	208,338	2	5	8	0	0	2	0	3
Indiana:									
Fort Wayne.....	93,573	1	1	2	0	0	0	0	2
Indianapolis.....	342,718	3	6	0	0	0	1	4	3
South Bend.....	76,709	0	1	0	0	0	0	0	2
Terre Haute.....	68,939	0	1	1	0	0	0	0	0
Illinois:									
Chicago.....	2,886,121	15	68	41	4	0	14	3	25
Cicero.....	55,968	1	1	0	0	0	1	0	2
Springfield.....	61,833	0	1	0	0	0	1	0	2
Michigan:									
Detroit.....	995,698	7	32	12	0	0	2	0	4
Flint.....	117,968	2	4	0	0	0	0	0	0
Grand Rapids.....	145,947	0	2	0	0	0	1	0	2
Wisconsin:									
Madison.....	42,519	0	1	0	0	0	4	0	0
Milwaukee.....	484,595	3	10	3	0	0	2	3	3
Racine.....	64,393	2	0	2	0	0	0	0	0
Superior.....	1 39,671	0	1	0	0	0	0	0	2
WEST NORTH CENTRAL									
Minnesota:									
Duluth.....	106,289	0	2	0	0	0	1	0	1
Minneapolis.....	409,125	14	11	19	0	0	0	0	1
St. Paul.....	241,891	3	11	3	0	0	1	0	4
Iowa:									
Davenport.....	61,262	0	0	0	0	0	0	0	0
Sioux City.....	79,662	0	0	0	0	0	0	1	0
Waterloo.....	39,667	2	0	1	0	0	0	0	0
Missouri:									
Kansas City.....	351,819	1	3	3	0	0	0	1	4
St. Joseph.....	78,232	0	1	0	0	0	0	1	0
St. Louis.....	803,853	0	19	18	0	0	9	0	0
North Dakota:									
Fargo.....	24,841	0	1	0	0	0	0	2	1
Grand Forks.....	14,547	0	0	0	0	0	0	0	0
South Dakota:									
Aberdeen.....	15,829	0	0	0	0	0	0	0	0
Sioux Falls.....	29,206	1	0	2	0	0	0	0	0
Nebraska:									
Lincoln.....	58,761	0	1	3	0	0	0	4	0
Omaha.....	204,382	2	5	2	0	0	1	0	2
Kansas:									
Topeka.....	52,555	0	1	1	0	0	0	0	0
Wichita.....	79,261	1	1	0	0	0	0	0	1

1 Population Jan. 1, 1920.



## City reports for week ended August 22, 1925—Continued

Division, State, and city	Population July 1, 1923, estimated	Chicken pox, cases reported	Diphtheria		Influenza		Measles, cases reported	Mumps, cases reported	Pneumonia, deaths reported
			Cases, estimated expectancy	Cases reported	Cases reported	Deaths reported			
SOUTH ATLANTIC									
Delaware:									
Wilmington.....	117,728	0	1	3	0	0	1	0	
Maryland:									
Baltimore.....	773,580	6	11	8	0	0	11	4	
Cumberland.....	32,361	0	0	3	0	0	0	0	
Frederick.....	11,301	0	1	0	0	0	0	0	
District of Columbia:									
Washington.....	1,437,571	2	3	5	0	0	4	0	
Virginia:									
Lynchburg.....	30,277	0	1	1	0	0	0	0	
Norfolk.....	159,089	0	1	0	0	0	0	0	
Richmond.....	181,044	0	4	6	0	0	0	6	
Roanoke.....	55,502	0	2	0	0	0	0	0	
West Virginia:									
Charleston.....	45,597	0	1	1	0	0	0	0	
Huntington.....	57,918	0	0	0	0	0	2	0	
Wheeling.....	156,308	0	0	0	0	0	0	0	
North Carolina:									
Raleigh.....	29,171	0	0	1	0	0	0	0	
Wilmington.....	35,719	1	0	0	0	0	0	0	
Winston-Salem.....	53,230	0	1	1	0	0	1	0	
South Carolina:									
Charleston.....	71,245	0	1	0	0	0	0	0	
Columbia.....	39,688	0	1	0	0	0	0	0	
Greenville.....	25,789	0	1	0	0	0	0	0	
Georgia:									
Atlanta.....	222,963	1	3	1	1	0	0	0	
Brunswick.....	15,937	0	0	1	0	0	0	1	
Savannah.....	89,448	0	1	0	0	0	0	0	
Florida:									
St. Petersburg.....	24,403	0	0	0	0	0	0	0	
Tampa.....	56,030	0	1	0	1	0	0	0	
EAST SOUTH CENTRAL									
Kentucky:									
Covington.....	57,877	0	1	0	0	0	0	0	
Louisville.....	257,071	0	3	0	1	0	0	1	
Tennessee:									
Memphis.....	170,067	0	3	1	0	1	0	0	
Nashville.....	121,128	0	1	1	0	0	1	0	
Alabama:									
Birmingham.....	195,901	0	3	4	0	1	0	0	
Mobile.....	63,858	0	0	3	0	0	0	0	
Montgomery.....	45,383	0	0	2	0	0	0	1	
WEST SOUTH CENTRAL									
Arkansas:									
Fort Smith.....	30,635	0	1	0	0	0	0	0	
Little Rock.....	70,916	0	1	0	0	0	0	0	
Louisiana:									
New Orleans.....	404,575	0	7	4	2	1	0	0	
Shreveport.....	54,590	0	1	0	0	0	0	0	
Oklahoma:									
Oklahoma.....	101,150	0	1	0	0	0	0	0	
Tulsa.....	102,018	0	1	3	0	0	1	0	
Texas:									
Dallas.....	177,274	0	3	4	0	1	2	0	
Galveston.....	46,877	0	1	1	0	0	0	0	
Houston.....	154,970	0	2	4	0	0	0	0	
San Antonio.....	184,727	0	0	0	0	0	0	1	
MOUNTAIN									
Montana:									
Billings.....	16,927	0	0	0	0	0	0	1	
Great Falls.....	27,787	1	1	0	0	0	0	7	
Helena.....	12,037	0	1	1	0	0	0	0	
Missoula.....	12,668	0	0	0	0	0	0	0	
Idaho:									
Boise.....	22,806	0	0	1	0	0	0	0	

1 Population Jan. 1, 1920.

## City reports for week ended August 22, 1925—Continued

Division, State, and city	Population July 1, 1923, estimated	Chick- en pox, cases re- ported	Diphtheria		Influenza		Meas- les, cases re- ported	Mumps, cases re- ported	Pneu- monia, deaths re- ported
			Cases, esti- mated expec- tancy	Cases re- ported	Cases re- ported	Deaths re- ported			
MOUNTAIN—continued									
Colorado:									
Denver.....	272,031	1	8	2	0	1	1	0	3
Pueblo.....	43,519	0	2	4	0	0	0	0	3
New Mexico:									
Albuquerque.....	16,648	0	0	0	0	0	0	0	0
Arizona:									
Phoenix.....	33,899	0	-----	0	0	0	0	0	0
Utah:									
Salt Lake City.....	126,241	1	2	0	0	0	2	8	1
Nevada:									
Reno.....	12,429	0	0	0	0	0	0	0	0
PACIFIC									
Washington:									
Seattle.....	1,315,685	3	3	1	0	-----	0	3	-----
Spokane.....	104,573	2	2	8	0	-----	0	0	-----
Tacoma.....	101,731	2	1	4	0	0	2	0	0
Oregon:									
Portland.....	273,621	4	3	6	0	0	0	3	2
California:									
Los Angeles.....	666,853	2	23	22	0	0	1	4	7
Sacramento.....	69,950	0	1	3	0	1	0	1	0
San Francisco.....	539,038	10	14	2	1	1	1	4	6

Division, State, and city	Scarlet fever		Smallpox			Tuber- culosis, deaths re- ported	Typhoid fever			Whoop- ing cough, cases re- ported	Deaths, all causes
	Cases, esti- mated expect- ancy	Cases re- ported	Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		
NEW ENGLAND											
Maine:											
Portland.....	1	0	0	0	0	0	1	1	0	0	14
New Hampshire:											
Concord.....	0	0	0	0	0	1	0	0	0	1	6
Manchester.....	1	0	0	0	0	0	0	0	0	-----	18
Nashua.....	0	0	0	0	0	0	0	0	0	0	8
Vermont:											
Barre.....	1	0	0	0	0	0	0	0	0	4	2
Burlington.....	1	0	0	0	0	0	0	0	0	0	4
Massachusetts:											
Boston.....	10	14	0	0	0	15	4	6	0	39	172
Fall River.....	1	0	0	0	0	1	2	1	0	3	19
Springfield.....	1	0	0	0	0	1	1	1	0	8	26
Worcester.....	2	13	0	0	0	3	0	3	0	9	38
Rhode Island:											
Pawtucket.....	0	1	0	0	0	1	0	0	0	0	-----
Providence.....	2	4	0	0	0	4	1	0	0	2	-----
Connecticut:											
Bridgeport.....	1	2	0	0	0	2	0	1	0	0	35
Hartford.....	1	1	0	0	0	3	2	0	0	3	33
New Haven.....	1	2	0	0	0	0	4	0	0	21	23
MIDDLE ATLANTIC											
New York:											
Buffalo.....	4	3	0	0	0	9	3	3	1	2	116
New York.....	23	10	0	0	0	181	43	63	6	76	1,071
Rochester.....	3	5	0	0	0	6	1	0	0	12	61
Syracuse.....	3	1	0	0	0	0	1	2	0	9	28
New Jersey:											
Camden.....	1	7	1	0	0	0	2	3	0	4	35
Newark.....	4	2	0	0	0	4	2	3	0	32	78
Trenton.....	1	0	0	0	0	1	2	1	0	0	33

1 Population Jan. 1, 1920.

2 Pulmonary tuberculosis only.

## City reports for week ended August 22, 1925—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- culosis, deaths re- ported	Typhoid fever			Whoop- ing cough, cases re- ported	Deaths, all causes
	Cases, estimated expect- ancy	Cases re- ported	Cases, estimated expect- ancy	Cases re- ported	Deaths re- ported		Cases, estimated expect- ancy	Cases re- ported	Deaths re- ported		
MIDDLE ATLANTIC— continued											
Pennsylvania:											
Philadelphia.....	14	13	0	0	0	42	14	9	2	45	417
Pittsburgh.....	6	5	0	0	0	8	4	4	1	6	162
Reading.....	0	0	0	0	0	0	2	0	0	17	26
EAST NORTH CENTRAL											
Ohio:											
Cincinnati.....	3	4	0	0	0	9	3	4	1	2	122
Cleveland.....	7	5	1	0	0	9	6	6	1	65	158
Columbus.....	2	0	0	0	0	2	2	5	1	7	73
Toledo.....	6	3	0	0	0	6	2	4	2	4	69
Indiana:											
Fort Wayne.....	0	0	0	0	0	0	1	15	0	0	20
Indianapolis.....	2	2	1	0	0	3	3	1	1	18	81
South Bend.....	1	1	0	0	0	0	1	0	0	3	20
Terre Haute.....	0	0	1	0	0	1	0	1	0	0	21
Illinois:											
Chicago.....	24	25	1	0	0	32	6	4	0	71	565
Cicero.....	0	0	0			0					
Springfield.....	0	0	0	0	0	2	1	0	0	0	23
Michigan:											
Detroit.....	18	28	2	0	0	32	5	5	0	109	249
Flint.....	3	0	0	0	0	1	1	0	0	4	20
Grand Rapids.....	1	3	0	3	0	1	0	1	0	5	31
Wisconsin:											
Madison.....	0	2	0	0	0	0	0	0	0	0	4
Milwaukee.....	8	3	1	0	0	5	1	0	1	78	63
Racine.....	1	3	0	0	0	2	0	0	0	6	7
Superior.....	1	2	0	0	0	1	0	0	0	0	10
WEST NORTH CENTRAL											
Minnesota:											
Duluth.....	2	13	0	0	0	2	0	0	0	0	18
Minneapolis.....	7	16	2	0	0	7	2	0	0	4	84
St. Paul.....	3	7	1	0	0	1	1	1	1	21	47
Iowa:											
Davenport.....	0	0	0	0			0	0			
Sioux City.....	0	1	1	3			0	0		0	
Waterloo.....	1	1	0	0			0	0			
Missouri:											
Kansas City.....	2	4	0	0	0	8	4	3	0	6	86
St. Joseph.....	0	1	0	0	0	0	1	0	0	0	23
St. Louis.....	5	19	0	0	0	12	8	14	1	21	212
North Dakota:											
Fargo.....	1	2	0	0	0	1	0	0	0	15	7
Grand Forks.....	1	0	0	0			0	0		6	
South Dakota:											
Aberdeen.....	0	0	0	0			0	0		0	
Sioux Falls.....	1	3	0	0	0	1	0	0	0	0	8
Nebraska:											
Lincoln.....	0	1	0	0	0	1	1	0	0	6	8
Omaha.....	1	3	1		0	2	0	2	1	3	45
Kansas:											
Topeka.....	1	1	0	0	0	0	2	1	0	2	12
Wichita.....	1	0	0	0	0	2	2	2	0	6	31
SOUTH ATLANTIC											
Delaware:											
Wilmington.....	0	0	0	0	0	4	0	0	0	0	22
Maryland:											
Baltimore.....	5	3	0	0	0	17	9	18	3	64	192
Cumberland.....	1	0	0	0	0	0	1	2	0	0	9
Frederick.....	0	0	0	0	0	0	0	0	0	0	5

## City reports for week ended August 22, 1925—Continued

Division, State, and city	Scarlet fever		Smallpox			Tuber- culo- sis, deaths re- ported	Typhoid fever			Whoop- ing cough, cases re- ported	Deaths, all causes
	Cases, esti- mated expect- ancy	Cases re- ported	Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		
SOUTH ATLANTIC— continued											
District of Col- umbia:											
Washington.....	3	2	0	0	0	5	6	3	1	18	108
Virginia:											
Lynchburg.....	0	1	0	0	0	1	1	1	0	0	4
Norfolk.....	0	0	0	0	0	5	2	0	0	0	
Richmond.....	2	4	0	0	0	5	3	4	0	1	41
Roanoke.....	0	1	0	0	0	0	3	2	0	2	9
West Virginia:											
Charleston.....	0	0	0	0	0	0	1	0	0	3	12
Huntington.....	0	1	0	0	0	1	1	2	0	0	
Wheeling.....	1	1	0	0	0	0	0	4	0	0	13
North Carolina:											
Raleigh.....	1	0	0	0	0	3	1	0	0	1	16
Wilmington.....	0	1	0	0	0	0	1	0	0	0	7
Winston-Salem.....	0	5	1	1	0	1	2	2	0	2	14
South Carolina:											
Charleston.....	0	0	0	0	0	4	2	7	0	0	32
Columbia.....	1	0	0	0	0	2	2	1	0	0	
Greenville.....	0	0	0	1	0	0	0	0	1	0	6
Georgia:											
Atlanta.....	3	2	1	0	0	0	4	9	1	1	67
Brunswick.....	0	0	0	0	0	0	0	1	0	0	
Savannah.....	0	0	0	0	0	0	1	0	0	0	23
Florida:											
St. Petersburg.....	0		0			0					
Tampa.....	0	1	0	0	0	0	0	0	0	0	29
EAST SOUTH CENTRAL											
Kentucky:											
Covington.....	0	0	0	1	0	0	0	0	0	0	21
Louisville.....	1	1	0	0	0	5	5	5	2	2	92
Tennessee:											
Memphis.....	1	0	0	0	0	8	6	19	1	1	69
Nashville.....	1	0	0	0	0	2	6	6	2	0	41
Alabama:											
Birmingham.....	2	4	0	6	0	6	7	0	1	0	56
Mobile.....	0	0	0	0	0	3	1	0	0	0	26
Montgomery.....	1	1	0	0			1	2		0	
WEST SOUTH CENTRAL											
Arkansas:											
Fort Smith.....	0	1	0	0			0	0		0	
Little Rock.....	1	0	0	0	0	1	2	9	0		
Louisiana:											
New Orleans.....	1	4	0	0	0	11	5	11	3	14	163
Shreveport.....	0	0	0	0	0	2	1	5	1	0	28
Oklahoma:											
Oklahoma.....	1	0	0	0	0	0	2	6	1	0	17
Tulsa.....	0	0	0	0			3	3		1	
Texas:											
Dallas.....	2	5	0	0	0	2	5	2	2		55
Galveston.....	0	0	0	0	0	1	0	0	0	0	13
Houston.....	0	1	0	1	0	4	1	0	0	0	64
San Antonio.....	0	0	0	0	0	9	1	2	1	0	59
MOUNTAIN											
Montana:											
Billings.....	0	4	0	0	0	1	0	0	0		5
Great Falls.....	1	2	0	1	0	0	1	1	0	1	8
Helena.....	0	0	0	0	0	1	0	0	0		5
Missoula.....	0	0	0	0	0	0	0	2	0	0	3
Idaho:											
Boise.....	0	0	0	0	0	0	0	0	0	0	4
Colorado:											
Denver.....	2	0	1	0	0	11	4	2	0	36	81
Pueblo.....	0	1	0	0	0	1	1	2	0	0	14

Division, State, and city	Scarlet fever		Smallpox			Tuber- cul- osis, deaths re- ported	Typhoid fever			Whoop- ing cough, cases re- ported	Deaths, all causes
	Cases, esti- mated expect- ancy	Cases re- ported	Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		Cases, esti- mated expect- ancy	Cases re- ported	Deaths re- ported		
<b>MOUNTAIN—CON.</b>											
New Mexico:											
Albuquerque.....	0	1	0	0	0	5	1	4	0	0	10
Arizona:											
Phoenix.....	0	0	0	0	0	2	0	0	0	2	11
Utah:											
Salt Lake City.....	1	0	0	0	0	0	1	4	1	15	29
Nevada:											
Reno.....	0	0	0	0	0	0	1	0	0	0	3
<b>PACIFIC</b>											
Washington:											
Seattle.....	3	3	2	1	0	0	1	3	0	13	0
Spokane.....	2	0	1	0	0	0	1	0	0	2	0
Tacoma.....	1	1	1	2	0	0	1	0	0	3	24
Oregon:											
Portland.....	3	2	4	0	0	4	1	4	0	0	0
California:											
Los Angeles.....	4	9	0	9	1	19	4	0	2	38	200
Sacramento.....	1	0	1	0	0	2	1	13	0	0	13
San Francisco.....	5	2	0	3	0	8	2	6	0	9	119

[illegible]

## City reports for week ended August 22, 1925—Continued

Division, State, and city	Cerebrospinal meningitis		Lethargic encephalitis		Pellagra		Poliomyelitis (infantile paralysis)			Typhus fever	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases, estimated expectancy	Cases	Deaths	Cases	Deaths
<b>WEST NORTH CENTRAL—continued</b>											
North Dakota:											
Fargo.....	0	0	0	1	0	0	0	0	0	0	0
Nebraska:											
Omaha.....	0	0	0	0	0	0	0	1	1	0	0
Kansas:											
Topeka.....	0	0	0	0	0	0	0	3	0	0	0
<b>SOUTH ATLANTIC</b>											
Maryland:											
Baltimore.....	0	0	0	0	0	1	2	0	0	0	0
District of Columbia:											
Washington.....	0	0	1	1	0	0	0	1	0	0	0
Virginia:											
Richmond.....	0	0	0	0	1	0	0	0	0	0	0
South Carolina:											
Charleston.....	0	0	0	0	0	0	0	0	1	0	0
Georgia:											
Atlanta.....	0	0	0	0	0	2	0	1	0	0	0
Savannah.....	0	0	0	0	0	1	0	0	0	0	0
<b>EAST SOUTH CENTRAL</b>											
Tennessee:											
Memphis.....	0	0	0	0	0	1	0	0	0	0	0
Alabama:											
Birmingham.....	0	0	0	0	0	0	0	1	0	0	0
Mobile.....	0	0	0	0	0	1	0	0	0	0	0
Montgomery.....	0	0	0	0	0	0	0	0	0	1	0
<b>WEST SOUTH CENTRAL</b>											
Louisiana:											
New Orleans <sup>1</sup> .....	0	0	0	0	0	0	0	2	1	0	0
Shreveport.....	0	0	0	0	0	3	0	0	0	0	0
<b>MOUNTAIN</b>											
Montana:											
Billings.....	0	0	0	0	0	0	0	1	0	0	0
Arizona:											
Phoenix.....	0	0	0	0	0	0	-----	1	1	0	0
<b>PACIFIC</b>											
Washington:											
Seattle.....	0	0	0	0	0	0	0	2	0	0	0
Tacoma.....	0	0	0	0	0	0	0	1	0	0	0
California:											
Los Angeles.....	1	2	0	0	0	0	0	16	3	0	0
Sacramento.....	0	0	0	0	0	0	0	1	1	0	0
San Francisco.....	1	1	1	0	1	1	0	2	0	0	0

<sup>1</sup> 5 cases of dengue reported at New Orleans.

The following table gives the rates per hundred thousand population for 105 cities for the 10-week period ended August 22, 1925. The population figures used in computing the rates were estimated as of July 1, 1923, as this is the latest date for which estimates are available. The 105 cities reporting cases had an estimated aggregate population of nearly 29,000,000 and the 97 cities reporting deaths had more than 28,000,000 population. The number of cities included in each group and the aggregate populations are shown in a separate table below.



Summary of weekly reports from cities, June 14 to August 22, 1925—Annual rates  
per 100,000 population <sup>1</sup>

## DIPHTHERIA CASE RATES

	Week ended—									
	June 20	June 27	July 4	July 11	July 18	July 25	Aug. 1	Aug. 8	Aug. 15	Aug. 22
105 cities.....	119	<sup>2</sup> 116	<sup>3</sup> 93	<sup>2</sup> 96	<sup>2</sup> 79	<sup>2</sup> 78	<sup>4</sup> 78	<sup>5</sup> 87	<sup>6</sup> 80	<sup>7</sup> 70
New England.....	97	127	117	62	62	62	62	82	92	52
Middle Atlantic.....	166	163	96	127	97	91	92	83	78	73
East North Central.....	93	<sup>2</sup> 84	<sup>2</sup> 87	<sup>2</sup> 89	<sup>2</sup> 73	<sup>2</sup> 68	<sup>2</sup> 74	<sup>2</sup> 101	<sup>2</sup> 72	<sup>2</sup> 55
West North Central.....	133	114	131	93	85	106	100	<sup>2</sup> 107	<sup>2</sup> 113	102
South Atlantic.....	51	73	41	55	26	45	<sup>10</sup> 50	55	73	<sup>11</sup> 64
East South Central.....	6	34	6	23	11	11	11	29	34	63
West South Central.....	74	46	60	42	28	70	46	23	51	60
Mountain.....	191	105	181	105	124	115	153	<sup>12</sup> 68	162	76
Pacific.....	113	107	<sup>13</sup> 145	125	99	104	67	148	84	104

## MEASLES CASE RATES

105 cities.....	434	<sup>2</sup> 303	<sup>2</sup> 228	<sup>2</sup> 193	<sup>2</sup> 159	<sup>2</sup> 105	<sup>4</sup> 73	<sup>5</sup> 53	<sup>6</sup> 48	<sup>7</sup> 31
New England.....	634	407	350	283	261	216	186	132	129	97
Middle Atlantic.....	544	382	258	249	199	128	77	69	57	38
East North Central.....	592	<sup>2</sup> 404	<sup>2</sup> 321	<sup>2</sup> 225	<sup>2</sup> 191	<sup>2</sup> 119	<sup>2</sup> 72	<sup>2</sup> 47	<sup>2</sup> 37	<sup>2</sup> 19
West North Central.....	87	60	31	35	29	19	29	<sup>2</sup> 11	<sup>2</sup> 30	6
South Atlantic.....	349	278	262	211	148	95	<sup>10</sup> 71	45	43	<sup>11</sup> 35
East South Central.....	114	132	97	120	80	63	29	11	17	6
West South Central.....	19	5	5	0	0	5	0	0	9	9
Mountain.....	76	95	38	57	29	38	105	<sup>12</sup> 20	19	29
Pacific.....	84	52	<sup>13</sup> 37	41	64	20	35	29	20	12

## SCARLET FEVER CASE RATES

105 cities.....	165	<sup>2</sup> 117	<sup>2</sup> 96	<sup>2</sup> 90	<sup>2</sup> 61	<sup>2</sup> 57	<sup>4</sup> 56	<sup>5</sup> 53	<sup>6</sup> 59	<sup>7</sup> 53
New England.....	142	107	112	147	80	72	75	102	84	92
Middle Atlantic.....	145	100	79	81	45	43	37	33	26	23
East North Central.....	217	<sup>2</sup> 157	<sup>2</sup> 122	<sup>2</sup> 97	<sup>2</sup> 67	<sup>2</sup> 67	<sup>2</sup> 64	<sup>2</sup> 52	<sup>2</sup> 58	<sup>2</sup> 58
West North Central.....	328	184	168	143	108	122	124	<sup>10</sup> 120	<sup>2</sup> 137	147
South Atlantic.....	61	45	59	45	47	15	<sup>10</sup> 35	22	41	<sup>11</sup> 43
East South Central.....	160	91	74	126	80	29	63	63	40	34
West South Central.....	37	56	46	9	23	32	31	56	70	51
Mountain.....	143	210	105	153	86	162	86	<sup>12</sup> 39	95	67
Pacific.....	116	107	<sup>13</sup> 71	52	61	46	49	64	87	44

## SMALLPOX CASE RATES

105 cities.....	36	<sup>2</sup> 25	<sup>2</sup> 14	<sup>2</sup> 16	<sup>2</sup> 15	<sup>2</sup> 10	<sup>4</sup> 10	<sup>5</sup> 9	<sup>6</sup> 7	<sup>7</sup> 6
New England.....	0	0	0	2	2	5	0	0	0	0
Middle Atlantic.....	1	0	1	0	1	0	0	0	0	0
East North Central.....	45	<sup>2</sup> 20	<sup>2</sup> 14	<sup>2</sup> 12	<sup>2</sup> 10	<sup>2</sup> 8	<sup>2</sup> 4	<sup>2</sup> 6	<sup>2</sup> 3	<sup>2</sup> 2
West North Central.....	60	37	17	21	17	12	15	<sup>2</sup> 9	<sup>2</sup> 11	6
South Atlantic.....	30	18	10	24	8	16	<sup>10</sup> 2	2	2	<sup>11</sup> 4
East South Central.....	200	132	63	80	46	40	23	51	23	40
West South Central.....	19	0	5	5	14	5	5	14	9	5
Mountain.....	19	29	29	19	19	0	57	<sup>12</sup> 20	10	10
Pacific.....	154	171	<sup>13</sup> 89	102	119	67	84	67	67	44

<sup>1</sup> The figures given in this table are rates per 100,000 population, annual basis, and not the number of cases reported. Populations used are estimated as of July 1, 1923.

<sup>2</sup> Cicero, Ill., not included. Report not received at time of going to press.

<sup>3</sup> Cicero, Ill., and Spokane, Wash., not included.

<sup>4</sup> Cicero, Ill., and Tampa, Fla., not included.

<sup>5</sup> Cicero, Ill., Waterloo, Iowa, and Helena, Mont., not included.

<sup>6</sup> Cicero, Ill., and Sioux City, Iowa, not included.

<sup>7</sup> Cicero, Ill., and St. Petersburg, Fla., not included.

<sup>8</sup> Waterloo, Iowa, not included.

<sup>9</sup> Sioux City, Iowa, not included.

<sup>10</sup> Tampa, Fla., not included.

<sup>11</sup> St. Petersburg, Fla., not included.

<sup>12</sup> Helena, Mont., not included.

<sup>13</sup> Spokane, Wash., not included.

*Summary of weekly reports from cities, June 14 to August 22, 1925—Annual rates per 100,000 population—Continued*

**TYPHOID FEVER CASE RATES**

	Week ended—									
	June 20	June 27	July 4	July 11	July 18	July 25	Aug. 1	Aug. 8	Aug. 15	Aug. 22
105 cities.....	22	27	35	35	38	34	41	41	48	57
New England.....	20	17	22	25	32	22	22	27	40	32
Middle Atlantic.....	14	18	15	17	25	21	30	23	33	45
East North Central.....	4	9	10	14	12	8	10	21	19	31
West North Central.....	12	10	21	44	44	39	48	43	58	48
South Atlantic.....	49	71	60	50	55	53	66	50	91	111
East South Central.....	80	91	200	177	223	177	189	274	217	183
West South Central.....	130	148	246	185	134	172	178	130	102	134
Mountain.....	38	0	10	29	19	48	57	107	105	105
Pacific.....	6	20	22	17	32	29	46	17	44	64

**INFLUENZA DEATH RATES**

	6	6	4	2	2	2	1	3	2	2
105 cities.....	6	6	4	2	2	2	1	3	2	2
New England.....	2	7	2	0	0	0	0	5	0	0
Middle Atlantic.....	4	6	2	2	2	3	1	2	2	2
East North Central.....	7	6	5	2	3	1	10	3	3	1
West North Central.....	7	4	0	0	0	4	0	0	0	0
South Atlantic.....	6	2	6	0	4	4	12	6	0	10
East South Central.....	24	17	11	17	0	6	0	6	6	11
West South Central.....	10	10	10	10	10	0	0	5	0	10
Mountain.....	0	10	0	0	0	10	0	10	10	10
Pacific.....	4	4	4	0	4	0	0	0	0	8

**PNEUMONIA DEATH RATES**

	81	66	58	61	57	50	61	56	63	55
105 cities.....	81	66	58	61	57	50	61	56	63	55
New England.....	62	60	45	45	50	52	55	37	30	40
Middle Atlantic.....	93	75	62	64	63	52	65	65	73	65
East North Central.....	81	42	45	59	47	40	52	38	51	43
West North Central.....	33	50	42	39	55	42	42	53	44	31
South Atlantic.....	77	96	75	67	51	55	63	73	81	64
East South Central.....	103	120	97	91	74	63	74	69	63	80
West South Central.....	92	76	61	61	76	66	111	71	87	82
Mountain.....	143	57	67	76	86	57	76	29	57	67
Pacific.....	65	53	82	74	45	65	69	78	90	53

<sup>1</sup> Cicero, Ill., not included. Report not received at time of going to press.

<sup>2</sup> Cicero, Ill., and Spokane, Wash., not included.

<sup>3</sup> Cicero, Ill., and Tampa, Fla., not included.

<sup>4</sup> Cicero, Ill., Waterloo, Iowa, and Helena, Mont., not included.

<sup>5</sup> Cicero, Ill., and Sioux City, Iowa, not included.

<sup>6</sup> Cicero, Ill., and St. Petersburg, Fla., not included.

<sup>7</sup> Waterloo, Iowa, not included.

<sup>8</sup> Sioux City, Iowa, not included.

<sup>9</sup> Tampa, Fla., not included.

<sup>10</sup> St. Petersburg, Fla., not included.

<sup>11</sup> Helena, Mont., not included.

<sup>12</sup> Spokane, Wash., not included.

<sup>13</sup> Cicero, Ill., and Helena, Mont., not included.

*Number of cities included in summary of weekly reports and aggregate population of cities in each group, estimated as of July 1, 1923*

Group of cities	Number of cities reporting cases	Number of cities reporting deaths	Aggregate population of cities reporting cases	Aggregate population of cities reporting deaths
Total.....	105	97	28,898,350	28,140,934
New England.....	12	12	2,098,746	2,098,746
Middle Atlantic.....	10	10	10,304,114	10,304,114
East North Central.....	17	17	7,032,535	7,032,535
West North Central.....	14	11	2,515,330	2,381,454
South Atlantic.....	22	22	2,566,901	2,566,901
East South Central.....	7	7	911,885	911,885
West South Central.....	8	6	1,124,564	1,023,013
Mountain.....	9	9	546,445	546,445
Pacific.....	6	3	1,797,830	1,275,841

## FOREIGN AND INSULAR

### PLAGUE ON VESSEL

*Steamship "Arcadia"—At Alexandria, Egypt, and Piræus, Greece.*—A case of plague was reported found on the steamship *Arcadia* at Alexandria, Egypt, July 27, 1925. The *Arcadia* left Alexandria July 21, arriving at Piræus, Greece, July 24. A case of plague was removed from the vessel on the day of arrival at Piræus, the vessel sailing on the same day on return trip to Alexandria.

*Plague at Piræus.*—Later information shows that two cases of plague had occurred on July 18 and 19, 1925, respectively, at Piræus.

### THE FAR EAST

*Reports for two weeks ended August 15, 1925.*—The following reports for the weeks ended August 8 and August 15, 1925, were transmitted by the far eastern bureau of the health section of the League of Nations, located at Singapore, to the headquarters at Geneva:

WEEK ENDED AUGUST 8, 1925

Port	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Bombay		1		0	3	2
Madras		0		0	28	8
Rangoon		19		0	5	1
Karachi		1	0	0	0	0
Negapatam		0	0	0	0	0
Singapore	0	0	0	0	0	0
Port Swettenham	0	0	0	0	0	0
Penang	0	0	0	0	0	0
Batavia	0	0	0	0	0	0
Soerabaya <sup>1</sup>	0	0	0	0	0	0
Samarang	0	0	0	0	0	0
Belawan Deli	0	0	0	0	0	0
Macassar	0	0	0	0	0	0
Sandakan (North Borneo)	0	0	0	0	0	0
Kuching (Sarawak)	0	0	0	0	3	1
Bangkok <sup>1</sup>	1	1	0	0	0	0
Saigon and Cholon	0	0	0	1	0	0
Hongkong	0	0	0	0	0	0
Shanghai	0	0	31	13	0	0
Manila	0	0	0	0	0	0
Colombo <sup>1</sup>	1	1	0	0	0	0
Nagasaki	0	0	0	0	0	0
Yokohama	0	0	0	0	0	0
Simonseski	0	0	0	0	0	0
Kobe	0	0	0	0	0	0
Moji	0	0	0	0	0	0
Osaka	0	0	0	0	3	0
Keelung (Formosa)	0	0	0	0	0	0
Fou-San-Po (Korea)	0	0	0	0	0	0
Adelaide	0	0	0	0	0	0
Brisbane	0	0	0	0	0	0
Fremantle	0	0	0	0	0	0
Melbourne	0	0	0	0	0	0
Sydney	0	0	0	0	0	0
Suez	0	0	0	0	0	0
Port Said	2	0	0	0	0	0
Mombasa (Kenya)	0	0	0	0	0	0
Massaua (Eritrea)	0	0	0	0	0	0
Djibuti	0	0	0	0	0	0
Durban (Natal)	0	0	0	0	0	0
Cape of Good Hope	0	0	0	0	0	0

(1963)

## WEEK ENDED AUGUST 15, 1925

Port	Plague		Cholera		Smallpox	
	Cases	Deaths	Cases	Deaths	Cases	Deaths
Calcutta.....				6	7	7
Bombay.....		2		0	1	
Madras.....		0		2	21	12
Rangoon.....	23			1	2	0
Karachi.....	0	0	0	0	0	0
Nagapattam.....	0	0	0	0	0	0
Singapore.....	0	0	0	0	0	0
Port Swettenham.....	0	0	0	0	0	0
Penang.....	0	0	0	0	0	0
Batavia.....	0	0	0	0	0	0
Soerabaya <sup>1</sup> .....	1	1	0	0	1	0
Samarang.....	0	0	0	0	0	0
Belawan Deli.....	0	0	0	0	0	0
Macassar.....	0	0	0	0	0	0
Sandakan <sup>1</sup> (North Borneo).....	0	0	0	0	0	0
Kuching (Sarawak).....	0	0	0	0	4	0
Bangkok.....	0	0	0	0	0	0
Saigon and Cholon.....	0	0	0	0	0	0
Hongkong.....	0	0	0	0	0	0
Shanghai.....	0	0	82	19	0	0
Manila.....	0	0	0	1	0	0
Colombo <sup>1</sup> .....	1	1	0	0	0	0
Nagasaki.....	0	0	0	1	0	0
Yokohama.....	0	0	0	0	0	0
Simonseski.....	0	0	0	0	0	0
Moji.....	0	0	0	0	0	0
Kobe.....	0	0	0	0	0	0
Osaka.....	0	0	0	0	0	0
Keelung (Formosa).....	0	0	0	0	0	0
Fou-San-Po (Korea).....	0	0	0	0	0	0
Adelaide.....	0	0	0	0	0	0
Brisbane.....	0	0	0	0	0	0
Fremantle.....	0	0	0	0	0	0
Melbourne.....	0	0	0	0	0	0
Sydney.....	0	0	0	0	0	0
Port Said.....	1	0	0	0	0	0
Mombasa (Kenya).....	0	0	0	0	0	0
Massawa (Eritrea).....	0	0	0	0	0	0
Djibuti.....	0	0	0	0	0	0
Durban (Natal).....	0	0	0	0	0	0
Capo of Good Hope.....	0	0	0	0	0	0

<sup>1</sup> No plague infection found among rats examined.

## CEYLON

*Cholera nostras*—Colombo—July 19–25, 1925.—During the week ended July 25, 1925, three deaths from cholera nostras were reported at Colombo, Ceylon.

## CHINA

*Cholera*—Shanghai.—Cholera was reported at Shanghai, China, during the week ended August 1, 1925. From that time to August 15, 1925, 82 cases with 39 deaths were reported.

## EGYPT

*Plague*—July 30–August 5, 1925—Summary (comparative).—During the week ended August 5, 1925, one case of plague was reported in Egypt. The case occurred at Port Said. The total number of cases reported from January 1 to August 5, 1925, was 90, the number reported for the corresponding period in the year 1924 being 344.

## GREECE

*Mortality from malaria—Saloniki—June 30–July 20, 1925.*—During the three-week period ended July 20, 1925, 51 deaths from malaria were reported at Saloniki, Greece. Population, census, exclusive of refugees, 175,000. Of these latter, 145,000 were stated to be quartered in the city and 49,000 in concentration camps outside of city.

*Plague—Athens and Piræus, August 1–14, 1925.*—During the two weeks ended August 14, 1925, 16 cases of plague were reported at Athens and Piræus, Greece. Of these, 9 cases occurred at Athens and 7 cases at Piræus.

## LIBERIA

*Yellow fever—Monrovia.*—Recent information indicated the presence of yellow fever in Monrovia, Liberia. Under date of August 22, 1925, the following cablegram was received from that city: "Yellow fever has not been found outside of Monrovia. There is no epidemic. No cases or deaths in Monrovia now."

## MADAGASCAR

*Plague—Tamatave, June 1–7, 1925—Tananarive Province, June 16–30, 1925.*—Plague has been reported in Tananarive Province, Madagascar, as follows: At Tamatave (seaport), June 1 to 7, 1 fatal case; Province of Tananarive, June 16 to 30, 1925, 16 cases with 15 deaths, of which 7 cases were bubonic in type, 3 pneumonic, and 6 septicemic.

## MEXICO

*Epidemic smallpox—El Hule and other localities, State of Oaxaca, August 14, 1925.*—Under date of August 14, 1925, epidemic smallpox was reported present at El Hule and other localities in the State of Oaxaca, Mexico.

## PERSIA

*Epidemic relapsing fever—Province of Khorassan, December, 1924–July, 1925.*—Recent information shows the presence, in July, 1925, of epidemic relapsing fever occurring in the Province of Khorassan, on the Afghan frontier of Persia. The cases occurred in two localities in the Bakharz district and at a few localities in the neighboring districts of Turbat-i-Shaik, Jam, and Khaf, with an estimated number of 1,000 deaths.

An epidemic disease of undetermined form was stated to have been present in the district of Bakharz, with 242 reported deaths, during December, 1924. The symptoms were fever with headache, pain in the chest, jaundice, hemorrhages from the nose, eyes, and mouth, and, in fatal cases, death within 30 hours from onset.



## PERU

*Plague—Lima, August, 1925.*—Local press notices dated August 14, 1925, show the prevalence of plague at Lima, Peru, with 14 cases reported at the lazaretto August 13. Dead rats were also reported.

*Plague at Cañete.*—Under the same date the occurrence of plague cases was reported at Cañete.

*Callao.*—Previous press reports (July) state that plague was present in Callao.

## UNION OF SOUTH AFRICA

*Plague—Animals concerned in transmission.*<sup>1</sup>—A memorandum on plague and its cause and prevention, issued under date of February 1, 1925, by the department of public health of the Union of South Africa, states that the rodents mainly concerned in the continuation and spread of plague are, in towns and villages, the black rat, the brown rat, and the house mouse, and in country districts, the gerbille, multimammate mouse, large-eared mouse, striped mouse, karoo rat, water rat, ground squirrel or bushy-tailed meerkat, spring hare, cape hare, and Zulu hare. The cat, dog, mongoose, and suricat also sometimes contract plague, but are less susceptible than the rodents.

The following examples of spread of infection are typical:

(a) Mrs. A, a farmer's wife, became infected on a farm where gerbilles, meerkats, and hares had been found dead in the veldt some months before. She developed the septicemic form of the disease, and before she died was kissed by her husband, son, and daughter-in-law. All three contracted plague, developed the pneumonic form of the disease, and died within one week.

(b) At a farm three members of one household became infected with plague of the pneumonic type from two others who had commenced with bubonic plague and later developed pneumonic symptoms. Lung infection here was doubtless due either to sputum containing plague bacilli being coughed into the faces or onto the hands of the attendants or to direct infection through kissing the patient.

## CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER

The reports contained in the following tables must not be considered as complete or final as regards either the lists of countries included or the figures for the particular countries for which reports are given.

Reports Received During Week Ended September 11, 1925 <sup>2</sup>

## CHOLERA

Place	Date	Cases	Deaths	Remarks
China:				
Shanghai.....	July 26-Aug. 15...	82	39	
India:				
Bombay.....	July 5-18.....	5	4	May 3-23, 1925: Cases, 14,592; deaths, 8,900. Apr. 26-June 27, 1925: Cases, 33,647; deaths, 19,950. (Corrected figures.)
Madras.....	July 19-Aug. 1....	4	3	
Philippine Islands:				
Manila.....	July 20-26.....	6		

<sup>1</sup> Data from "Health," Vol. III, No. 4, issued by the Australian Department of Health.

<sup>2</sup> From medical officers of the Public Health Service, American consuls, and other sources.

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued**

## **Reports Received During Week Ended September 11, 1925—Continued**

### **PLAGUE**

Place	Date	Cases	Deaths	Remarks
British East Africa:				
Uganda—				
Entebbe.....	Apr. 1-30.....	57	49	
Do.....	May 1-31.....	72	69	
Ceylon:				
Colombo.....	July 12-25.....	4	4	
Egypt:				
Port Said.....	Aug. 5-6.....	2		July 30-Aug. 5, 1925: Cases, 1. Jan. 1-Aug. 5, 1925: Cases, 90. Corresponding period, 1924: Cases, 344.
France:				
Marseille.....	Aug. 18.....	2		
Greece:				
Athens.....	Aug. 1-14.....	16	4	Including Piræus.
Hawaii:				
Honokaa.....	Aug. 7.....	1		Occurring in hospital. Aug. 15, 1925: Plague-infected rodent re- ported Aug. 15, 1925, vicinity of Paaulo, Hawaii.
India:				
Bombay.....	July 5-18.....	4	2	May 3-23, 1925: Cases, 3,954; deaths, 3,361. (Corrected fig- ures.) Apr. 26-June 27, 1925: Cases, 10,166; deaths, 8,913. (Corrected figures.)
Madras Presidency.....	June 28-Aug. 1.....	20	7	
Madagascar:				
Tamatave.....	June 1-7.....		1	
Tananarive Province.....	June 16-30.....	16	15	Bubonic, 7 cases; pneumonic, 3; septicemic, 6. Deaths: Bu- bonic, 7; pneumonic, 2; septi- cemic, 6.
Peru:				
Callao.....	July, 1925.....			Present. Press reports.
Cafete.....	Aug., 1925.....			Do.
Lima.....	Aug. 14.....	14		Press reports.
Siam:				
Bangkok.....	June 23-July 11.....	2	2	
Straits Settlements:				
Singapore.....	July 12-18.....	1	1	
Tunis:				
Tunis.....				Aug. 12-18, 1925: Plague rodent.
On vessel:				
Steamship Arcadia.....	July 24-27.....	2		At Piræus, Greece, from Alex- andria, Egypt.

### **SMALLPOX**

Brazil:				
Rio de Janeiro.....	July 19-25.....	11	7	
British East Africa:				
Mombasa.....	July 5-18.....	21		
Tanganyika.....	June 14-20.....	1		
Do.....	June 21-27.....	47	3	
Bulgaria:				
Sofia.....	Aug. 6-12.....	1		
Canada:				
Alberta—				
Calgary.....	Aug. 2-8.....	1		From Crossfield, Alberta.
China:				
Foochow.....	July 12-18.....			Present.
Manchuria—				
Dairen.....	July 13-19.....	2	1	
Tientsin.....	July 12-18.....	1		Reported by British munic- ipality.
India:				
Bombay.....	July 5-18.....	9	7	May 3-23, 1925: Cases, 13,866; 3,322. (Corrected figures.) Apr. 26-June 27, 1925: Cases, 37,107; deaths, 9,152. (Corrected fig- ures.)
Madras.....	July 19-Aug. 1.....	52	22	
Mexico:				
Mexico City.....	Aug. 9-15.....	1		
Oaxaca, State.....	Aug. 14.....			
San Luis Potosi.....	Aug. 16-22.....		1	Epidemic at El Hule and other localities.
Portugal:				
Oporto.....	Aug. 9-15.....	1		
Siam:				
Bangkok.....	June 28-July 11.....	2	1	

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**CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued****Reports Received During Week Ended September 11, 1925—Continued****SMALLPOX—Continued**

Place	Date	Cases	Deaths	Remarks
Spain:				
Malaga.....	Aug. 9-15.....		5	
Straits Settlements:				
Singapore.....	July 5-11.....	1	1	
Tunis:				
Tunis.....	Aug. 5-11.....	5	7	

**TYPHUS FEVER**

Tunis:				
Tunis.....	Aug. 12-18.....	1	1	

**YELLOW FEVER**

Liberia:				
Monrovia.....	Aug. 7.....	4		

**Reports Received from June 27 to September 4, 1925<sup>1</sup>****CHOLERA**

Place	Date	Cases	Deaths	Remarks
Algeria:				
Algiers.....	May 11-20.....	1		
Ceylon:				
Colombo.....	May 10-16.....	2	2	Jan. 25-May 30, 1925: Cases, 78; deaths, 58.
India:				
Bombay.....	May 10-June 27.....	2	1	Apr. 26-June 27, 1925: Cases, 33,647; deaths, 19,950. (Corrected figures.)
Do.....	June 28-July 4.....	2	2	
Calcutta.....	May 3-9.....	58	49	
Do.....	May 17-23.....	70	61	
Do.....	June 14-20.....	12	11	
Do.....	July 5-11.....	9	7	
Madras Presidency.....	June 6-20.....	4	1	
Do.....	July 5-18.....	2	2	
Rangoon.....	May 3-June 6.....	22	15	Feb. 8-14, 1925: Cases, 2; deaths, 2. (Received out of date.)
Do.....	June 14-27.....	12	8	
Do.....	June 28-July 18.....	1	2	
Indo-China:				
Saigon.....	May 4-June 7.....	4	3	
Japan:				
Yokohama.....	Sept. 2.....	5	3	
Philippine Islands:				
Albay.....				
Tabaco.....	June 14-20.....	1	1	
Bulacan.....	do.....	1	1	
Do.....	June 28-July 18.....	3	2	
Camarines Sur.....	July 3-9.....	1		
Lagonoy.....	June 6-12.....	2	1	
Leyte.....	July 8-14.....	1	1	
Manila.....	June 15-28.....	3		
Do.....	June 29-July 12.....	6	1	June 1-Aug. 8, 1925: Cases, 17.
Mountain Province.....	June 23-29.....	1	1	
Siam:				
Bangkok.....	Apr. 29-June 27.....	9	4	
Turkey:				
Constantinople.....	May 16-22.....	1		

<sup>1</sup> From medical officers of the Public Health Service, American consuls, and other sources.

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued**

**Reports Received from June 27 to September 4, 1925—Continued**

## **PLAGUE**

Place	Date	Cases	Deaths	Remarks
Brazil:				
Bahia.....	May 3-June 13....	5	4	
British East Africa:				
Uganda.....	Feb. 1-28.....	28	28	
Entebbe.....	May 4-June 4.....	78	73	
Ceylon:				
Colombo.....	May 10-June 30.....	11	10	
Do.....	June 28-July 11.....	5	3	
China:				
Foochow.....	May 24-31.....			Reported present in epidemic form.
North Manchuria.....	May 27.....	2	1	
Ecuador:				
Guayaquil.....	June 1-15.....	1	1	May 16-June 30, 1925: Rats examined, 30,347; found infected, 95. July 1-15, 1925: Rats taken, 9,926; rats found infected, 16.
Egypt.....				June 1-July 15, 1925: Cases, 88, Corresponding period 1924—cases, 328, Bubonic.
City—				
Alexandria.....	June 17-24.....	2	2	
Port Said.....	June 17-July 8.....	6	3	
Do.....	July 30-Aug. 5.....	1		
Suez.....	June 14-27.....	3	2	Do.
Province—				
Assiout.....	June 5.....	1	1	
Beni-Souef.....	June 10-16.....	8	4	
Charkieh.....	June 6-8.....	1	1	
Kena.....	June 17.....	1	1	
Minia.....	June 6-17.....	3	2	
Gold Coast.....	March-April.....	3	3	
Greece:				
Athens.....	July 1-31.....	17	4	
Piræus.....	July 18-19.....	2		
Hawaii:				
Honokaa.....				June 28, 1925: Plague-infected rat trapped at Honokaa Plantation.
Kukuhale.....	July 31.....			Plague-infected rat.
India:				
Bombay.....	Apr. 26-June 27.....	65	69	Apr. 26-June 27, 1925: Cases, 10,166; deaths, 8,913. Corrected figures.
Do.....	June 28-July 4.....	5	4	
Calcutta.....	May 30-June 6.....	1	1	
Do.....	July 5-11.....	1	1	
Karachi.....	May 18-June 6.....	4	3	
Madras.....	May 10-June 30.....	15	8	
Rangoon.....	May 3-June 27.....	113	95	Feb. 8-14, 1925: Cases, 13; deaths, 13. (Received out of date.)
Do.....	June 28-July 4.....	20	18	
Indo-China:				
Cochin-China—				
Saigon.....	Apr. 20-June 21.....	3	3	Including 100 square kilometers of surrounding country.
Iraq:				
Bagdad.....	May 24-June 6.....	9		
Do.....	June 21-27.....	5	1	
Java:				
Batavia.....	May 6-June 19.....	32	31	
Do.....	July 5-10.....	19	19	In Province.
Cheribon.....	Apr. 2-June 13.....		78	
Paseroacan Residency.....	Mar. 7-May 25.....			Epidemic in several localities.
Pekalongan.....	Apr. 9-June 13.....		86	
Soerabaya.....	May 7-27.....	3	3	
Soerakarta Residency.....	May 28.....			Epidemic at Kalidgambe.
Tegal.....	Apr. 2-16.....		36	
Do.....	May 24-June 13.....		16	
Madagascar:				
Province—				
Itasy.....	Apr. 1-15.....	1	1	
Tananarive.....	Apr. 1-June 15.....	216	185	
Town—				
Tamatave (port).....	Apr. 1-15.....	2		
Tananarive Town.....	Apr. 16-May 31.....	5	5	
Mauritius.....				April, 1925: One case.
Nigeria:				
Do.....	December, 1924.....	17	13	
Do.....	January, 1925.....	10	6	
Do.....	March-April.....	18	14	

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued**

## **Reports Received from June 27 to September 4, 1925—Continued**

### **PLAGUE—Continued**

Place	Date	Cases	Deaths	Remarks
Russia:				
Kalmyk District.....	May 19-31.....	10	8	
North Caucasus.....	June 6-7.....	2	2	
Urts.....	May 25-June 3.....	2	2	In laboratory worker and contact. Locality, Province of Bukeevsk.
Siam:				
Bangkok.....	Apr. 26-June 20.....	13	11	
Straits Settlements:				
Singapore.....	May 3-30.....	9	9	
Do.....	June 28-July 4.....	1	1	
Turkey:				
Constantinople.....	May 25-31.....	1		
Union of South Africa:				
Cape Province—				
Kimberly.....	June 14-20.....	1	1	In a Malay camp.
Do.....				One plague-infected house mouse.
Orange Free State—				
Boshof District.....	June 28-July 4.....	1	1	Native.
On vessel:				
Steamship Efratios Ca-	July 7-11.....	4	1	At Alexandria, Egypt. Vessel arrived July 7, 1925. Regular route, ports in Syria, Greece, and Port Said. Dead rats reported found on board.
voundis.				

### **SMALLPOX**

Algeria:				
Algiers.....	May 1-June 30.....	43	2	
Do.....	July 1-20.....	28		
Constantine.....	do.....	15		
Brazil:				
Bahia.....	June 28-July 25.....	4	2	
Pernambuco.....	Apr. 26-May 30.....	40	21	
Do.....	June 7-27.....	5	3	
Do.....	July 5-18.....	1	1	
Porto Alegre.....	June 14-20.....		1	
Rio de Janeiro.....	May 9-June 27.....	5	1	
Do.....	June 28-July 18.....	18	10	
British East Africa:				
Kenya—				
Mombasa.....	Apr. 19-June 20.....	27	13	
Mairobi.....	May 3-9.....	3	2	
Tanganyika Territory.....	Apr. 5-May 23.....	82	24	
Uganda.....	Feb. 1-28.....	2		
British South Africa:				
Northern Rhodesia.....	Apr. 28-May 4.....	3		
Southern Rhodesia.....	June 11-July 1.....	2		
Canada:				
British Columbia—				
Vancouver.....	June 1-28.....	7		
Do.....	July 6-Aug. 9.....	10		
New Brunswick—				
Restigouche County.....	June 1-30.....	1		
Ontario.....				
Galt.....	June 14-20.....	2		
Kingston.....	do.....	1		
Quebec—				
Quebec.....	July 26-Aug. 1.....	2	2	
Saskatchewan—				
Regina.....	May 24-30.....	3		
China:				
Amoy.....	May 17-June 30.....		7	
Do.....	July 12-25.....			
Antung.....	May 11-July 5.....	8		
Do.....	July 26.....	1		
Canton.....	May 10-June 13.....			
Chungking.....	May 3-30.....			
Foochow.....	May 9-June 20.....			
Hongkong.....	Apr. 19-June 13.....	15	12	
Manchuria—				
Dairen.....	Apr. 13-June 28.....	115	17	
Do.....	June 28-July 5.....	1	1	
Harbin.....	May 13-June 2.....	2		

May 31-July 25, 1925: Cases, 20; deaths, 1. Corresponding period, 1924: Cases, 24.

Present.

Do.  
Widespread.  
Present.



# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued**

## **Reports Received from June 27 to September 4, 1925—Continued**

### **SMALLPOX—Continued**

Place	Date	Cases	Deaths	Remarks
China—Continued.				
Nanking	May 9-July 25			Present.
Shanghai	May 3-June 6	5	2	
Do	July 6-25	1	1	
Swatow	May 17-July 11			Stated to be endemic.
Tientsin	May 9-June 6	3		
Chosen:				
Seoul	May 1-June 30	2		
Egypt:				
Alexandria	May 21-27	1	1	
Cairo	Mar. 19-May 13	5		
France:				February-May, 1925: Cases, 77.
Paris	May 21-31	1		
Germany:				
Baden (state)	July 12-25	2	1	
Stuttgart	July 5-11	3	1	
Gold Coast				January-April, 1925: Cases, 367; deaths, 29.
Great Britain:				
England and Wales				May 24-June 27, 1925: Cases, 441.
Birmingham	June 7-13	1		June 28-Aug. 1, 1925: Cases, 353.
Cardiff	June 14-20	1		
Do	Aug. 2-8	14	8	
Newcastle-on-Tyne	May 31-June 27	4		
Do	June 28-Aug. 8	8	1	
Greece:				January-May, 1925: Cases, 46; deaths, 8.
Athens	May 1-31		2	
Do	June 24-30	27	3	
Do	July 1-31	14	1	
Hungary:				
Budapest	July 5-18	13		
India:				Apr. 26-June 27, 1925: Cases, 37,107; deaths, 9,152. Corrected figures.
Bombay	Apr. 26-June 27	156	115	
Do	June 28-July 4	6	3	
Calcutta	May 3-9	109	100	
Do	May 17-23	75	61	
Do	May 31-June 20	88	81	
Do	July 5-11	12	8	
Karachi	May 18-June 27	6	1	
Do	June 28-July 4	1	1	
Madras	May 18-June 27	153	66	
Do	June 28-July 18	68	25	
Rangoon	May 3-June 27	207	99	
Do	June 28-July 4	2	1	
Indo-China:				
Cochin-China—				
Saigon	Apr. 20-May 21	13	9	Including 100 square kilometers of surrounding country.
Iraq:				Jan. 11-May 30, 1925: Cases, 136; deaths, 46.
Bagdad	Apr. 26-June 20	4	1	
Italy:				
Dec. 28-May 30		72		
Jamaica:				Apr. 26-June 27, 1925: Cases, 110.
Kingston	Apr. 26-June 27	19		June 28-Aug. 1, 1925: Cases, 159 (reported as alastrim).
Do	June 28-Aug. 1	22		Reported as alastrim.
Japan:				Do.
Kobe	May 24-June 27	2		
Nagasaki	May 15-21	2		
Do	July 6-19	1	1	
Taiwan	July 1-10	1		
Tokyo	June 14-20	1		
Yokohama	May 25-June 12	3		
Java:				
Batavia	May 2-June 26	2		
Do	July 4-10	1		
Brebes	Apr. 22-28	1		
Cheribon	Apr. 16-22		1	
Pekalongan	Apr. 2-8	1		
Rembang Residency	Apr. 23			Epidemic at Kawedanan.
Soerabaya	Apr. 16-June 27	304	41	
South Bantam	Apr. 16-22	1		
Tegal	Mar. 29-May 2	2	1	
Latvia:				May-June, 1925: Cases, 4.
Lithuania:				February-April, 1925: Cases, 5.
Malta:				
Do	June 1-30	9		
	July 1-31	5		

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued**

## **Reports Received from June 27 to September 4, 1925—Continued**

### **SMALLPOX—Continued**

Place	Date	Cases	Deaths	Remarks
Mexico:				
Durango	do.		11	
Do.	do.		13	
Guadalajara	June 2-29		10	
Do.	June 20-Aug. 17		15	
Mexico City	May 24-June 27	12		Including municipalities in Federal district. Do.
Do.	July 5-11	3		
Do.	July 26-Aug. 8	6		
Tampico	June 1-10		1	
Do.	July 1-31	4	2	
Morocco:				
Tangier	May 17-June 5			Present among natives.
Nigeria				December, 1924: Cases, 40; deaths, 16.
Do.				January-April, 1925: Cases, 1,377; deaths, 123.
Persia:				
Teheran	Mar. 21-May 21		29	
Peru:				
Arequipa	June 1-30		1	
Poland				Mar. 1-May 9, 1925: Cases, 23.
Portugal:				
Lisbon	Apr. 26-June 27	35	6	
Do.	June 28-Aug. 1	34	14	
Oporto	June 14-20	1		
Do.	July 19-25	4		
Rumania				January-February, 1925: Cases, 20.
Russia				December, 1924: Cases, 1,000
				January-March, 1925: Cases, 2,457. Later than previously published reports.
Siam:				
Bangkok	Apr. 20-June 27	27	19	
Spain:				
Malaga	May 24-June 20		15	
Do.	July 5-Aug. 1		13	
Valencia	May 31-June 27	3	1	
Straits Settlements:				
Singapore	May 17-23	1		
Switzerland:				
Berne	June 7-13	1		
Lucerne	June 14-20	4		
Syria:				
Beirut	Apr. 21-30	1		
Tripoli				Jan. 3-April, 1925: Cases, 14.
Tunis:				
Tunis	May 6-June 30		46	
Do.	July 1-Aug. 4		20	
Turkey:				
Constantinople	May 16-22	2		
Union South Africa:				
Cape Province	May 24-July 11			Outbreaks.
Port Elizabeth	Apr. 18-25	8	1	
Transvaal	May 3-June 6			Do.
Uruguay				December, 1924: Cases, 8.
Do.				February-March, 1925: Cases, 4.

### **TYPHUS FEVER**

Algeria:				
Algiers	May 11-20	6	2	In vicinity, 12 cases. Isolated.
Do.	July 1-20	13	7	
Constantine	July 1-10	17		
Bulgaria				District.
Sofia	May 28-June 3	2	2	November-December, 1924: 1 case. January-March, 1925: Cases, 36; deaths, 2.
Chile:				
Valparaiso	May 10-July 18		9	
China:				
Manchuria—				
Harbin	May 19-June 2	2		
Czechoslovakia				April, 1925: 1 case.

# **CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued**

## **Reports Received from June 27 to September 4, 1925—Continued**

### **TYPHUS FEVER—Continued**

Place	Date	Cases	Deaths	Remarks
Egypt:				
Alexandria.....	May 7-June 3.....	3	1	
Do.....	July 9-15.....	1		
Cairo.....	Mar. 26-May 13.....	6	4	
Port Said.....	May 14-20.....	1	1	
Do.....	July 30-Aug. 5.....	2		
Estonia.....				Apr. 1-May 30, 1925: Cases, 6.
Great Britain:				
Scotland—				
Greenock.....	Aug. 6-18.....	7		
Greece.....				January-May, 1925: Cases, 54; deaths, 6.
Athens.....	May 1-31.....		2	
Kalamata.....	Apr. 1-39.....		2	
Patras.....	June 23-July 4.....		2	
Iraq:				
Bagdad.....	July 12-18.....	1		
Ireland:				
Cork County.....	Aug. 25.....	3		
Latvia.....				April-June, 1925: Cases, 26.
Libau.....	July 14-20.....	1		
Lithuania.....				March-April, 1925: Cases, 118; deaths, 5.
Mexico:				
Mexico City.....	May 24-June 6.....	24		Including municipalities in Federal district.
Do.....	June 23-Aug. 1.....	39		Do.
San Luis Potosi.....	June 23-July 4.....		1	
Morocco.....				January-May, 1925: Cases, 362. Later than previously published reports.
Palestine:				
Dagania.....	July 21-27.....	1		
Ekron.....	do.....	1		
Jaffa District.....	June 2-8.....	2		
Majdal.....	May 26-June 8.....	3		
Ramleh.....	May 19-25.....	1		
Safad.....	June 9-15.....	1		
Do.....	July 21-27.....	1		
Tel Aviv.....	do.....	1		
Persia:				
Teheran.....	Apr. 21-May 21.....		1	
Peru:				
Arequipa.....	Apr. 1-June 30.....		3	
Poland.....				Mar. 1-Apr. 11, 1925: Cases 1,195; deaths, 74.
Portugal:				
Oporto.....	May 31-June 6.....	1		
Do.....	July 5-11.....	1		
Rumania:				
Constantza.....	May 1-31.....	1		
Russia.....				December, 1924: Cases, 5,062. January-March, 1925: Cases, 18,336. Later than previously published reports.
Spain:				
Valencia.....	June 7-13.....		1	
Tunis:				
Tunis.....	May 21-June 17.....	16	8	
Do.....	July 8-23.....	9	4	
Turkey:				
Constantinople.....	May 11-31.....	7	2	
Union of South Africa:				
Cape Province.....	Apr. 19-July 4.....	39	5	
Natal.....	May 3-July 11.....	14		
Durban.....	Feb. 1-July 4.....	18		
Orange Free State.....	Feb. 1-June 27.....	26	4	
Hoopstad.....	July 5-11.....			Outbreaks.
Transvaal.....	do.....	11	2	
Yugoslavia:				
Zagreb.....	May 8-21.....	7	1	

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**CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued**

**Reports Received from June 27 to September 4, 1925—Continued**

**YELLOW FEVER**

Place	Date	Cases	Deaths	Remarks
Gold Coast.....	Apr. 1-30.....	1	-----	
Ivory Coast:				
Lahou.....	June 1-10.....	1	1	
Nigeria:				
Ibadan.....	Apr. 24-30.....	1	-----	
Lagos.....	Apr. 29-May 5....	4	1	